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COMPENSATION FOR LOSSES FROM THE 9/11 ATTACKS

LLOYD DIXON

RACHEL KAGANOFF STERN



INSTITUTE FOR CIVIL JUSTICE

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Preface

The terrorist attacks of September 11, 2001, caused tremendous losses of life, property, and income, and the response to those losses by public and private organizations was unprecedented. This monograph examines the benefits received by those who were killed or seriously injured in the 9/11 attacks and the benefits provided to individuals and businesses in New York City due to the attack on the World Trade Center. The authors provide insight into the perceived shortcomings of the current compensation system in responding to losses caused by an event on the scale of 9/11. They examine the performance of the four basic mechanisms of the compensation system—insurance, the tort system, government programs, and charity.

This assessment should be useful in helping policymakers and stakeholders to understand how the losses created by 9/11 differ from losses stemming from natural disasters and other catastrophic events. A better understanding of how the compensation system responded in the aftermath of 9/11 should also help policymakers and stakeholders to develop objectives for compensation in the event of a future terrorist attack and to identify issues to be addressed in planning for the possibility of such an event.

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Summary

The terrorist attacks of September 11, 2001, caused tremendous losses of life, health, property, and income. The response of the federal government, private insurers, and charities to the losses experienced by individuals and businesses were of a scope and scale never before seen. Congress limited the role of the tort system and set up the September 11th Victim Compensation Fund (VCF) to provide compensation to those who were killed or suffered serious physical injuries in the attacks. Soon after the attacks, President Bush promised \$20 billion to help the New York City area recover from 9/11. Insurers paid out far more than they had for any other single event in U.S. history. Charitable giving and distributions from charitable organizations were unprecedented.

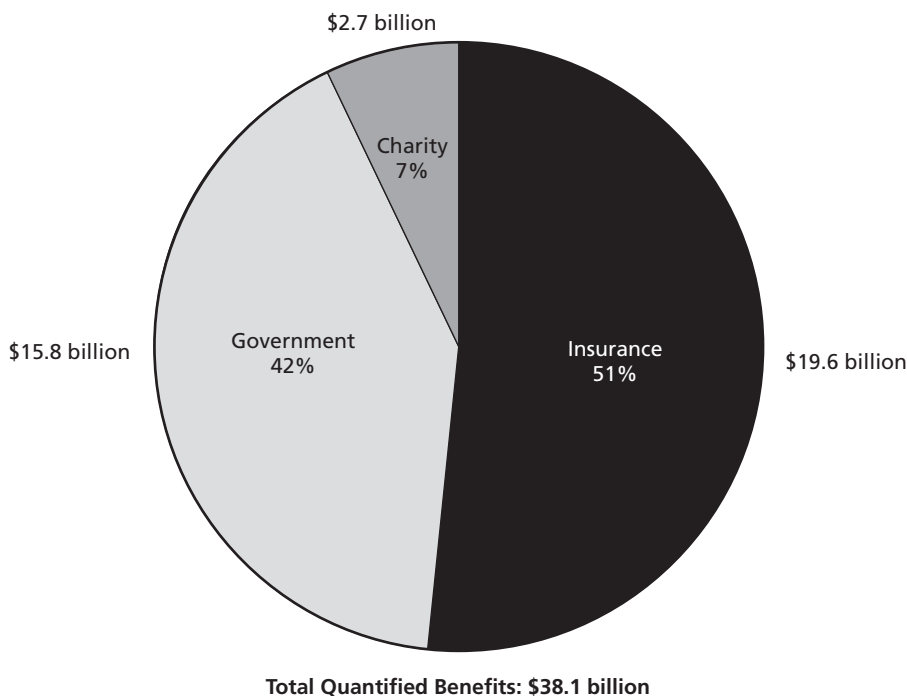
The institutions, programs, and policies that provided benefits to businesses and individuals affected by the 9/11 attacks can be thought of as a system composed of four primary compensation mechanisms: insurance, the tort system, government programs, and charity. This report provides a comprehensive description of how the compensation system as a whole operated after 9/11 and provides an assessment of the response for each group of victims—those who died or were seriously injured, those in New York City who were injured by environmental exposures or who suffered emotional injuries, residents of Lower Manhattan¹ who experienced property and financial losses, workers in New York City who were economically affected by 9/11, and New York City businesses that suffered property damage and declines in revenue and profits. This report also identifies issues that should be addressed in developing policies for compensation for losses in the event of future terrorist attacks. The findings are based on analysis of a comprehensive set of published reports, articles in academic journals, pieces from the popular press, and a series of structured interviews with a wide range of key stakeholders in New York City.

¹ We use the term *Lower Manhattan* to refer to the area south of Canal Street. See Appendix D for a map of that area.

Total Quantified Benefits

Figure S.1 illustrates the magnitude of the benefits provided to those killed in the attacks at the World Trade Center (WTC), the Pentagon, and the Pennsylvania crash site and to businesses and individuals in New York City affected by the attack on the WTC. The figure offers only a rough estimate of the benefits because some benefits could not be quantified, and other benefits were estimated with considerable uncertainty. Overall, we were able to capture \$38.1 billion in expenditures, which we describe as “quantified benefits.” Payments by insurers accounted for more than half of the total, and payments by government programs accounted for most of the rest. Despite their unprecedented scale, charitable distributions constituted only a modest share of the overall benefits. As of this writing, no payments have been made through the tort system. Some tort cases are being pursued, but it will be some time before the tort cases that have been filed are settled.

Figure S.1
Quantified Benefits by Compensation Mechanism



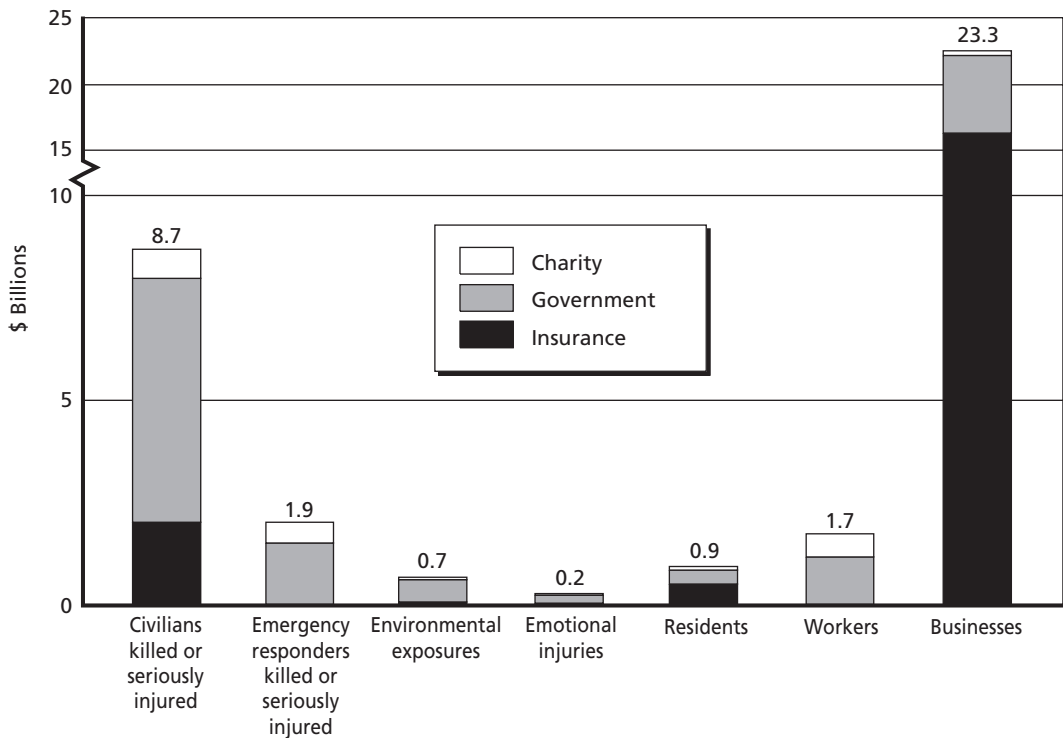
RAND MR264-S.1

NOTE: The government total does not include assistance to airlines or benefits paid for the repair of public buildings, the transportation system, or other components of the public infrastructure in New York City.

Figure S.2 shows the total quantified benefits for each of the victim groups examined in our analysis. For each victim group, the figure denotes the benefits provided by the various compensation mechanisms.²

The benefits we were able to quantify for those who were killed or seriously injured (the first two bars in Figure S.2) amount to nearly \$10.6 billion, or 28 percent of the total across all victim groups. Emergency responders received \$1.9 billion of that amount, or 18 percent of the benefits going to the dead and seriously injured, although emergency responders accounted for only 14 percent of those who were killed or seriously injured.

Figure S.2
Quantified Benefits by Victim Group and Source of Benefits



RAND MG264-S.2

NOTE: The first column, reading from left to right, includes benefits for those killed or seriously injured at the World Trade Center, the Pentagon, and the Pennsylvania plane crash site. The figure does not include \$650 million in unallocated charitable benefits.

² Individuals can be in more than one victim group. For each group, we focus on the benefits for an individual in his or her capacity as a member of that group.

One of the most striking findings is the large proportion of overall benefits that went to businesses: \$23.3 billion, or 61 percent of the total. The high proportion of benefits going to businesses reflects both the considerable property damage suffered by businesses in the attacks and the substantial effects of the attacks on the New York City economy.

The benefits provided to workers also reflect the extensive economic impact of 9/11. The aid provided directly to workers is much less than that provided to businesses, but workers also indirectly benefited from benefits provided to businesses.

Figure S.2 also shows how the source of benefits varied across the victim groups. Businesses were the most dependent on insurance, receiving benefits through property damage and business interruption policies; those who were killed or seriously injured were compensated primarily by the government, although they also received a substantial share of benefits from life insurance and charity. Workers, emergency responders, and those with emotional injuries were the victim groups that received the highest proportions of their total benefits from charity (although no group received more than one-third of its total benefits from charity). Each victim group received a substantial proportion of the benefits that we were able to quantify from the government. For example, workers received more than two-thirds of their benefits from the government.

Performance of Each Compensation Mechanism

Insurance

Insurers were able to mobilize hundreds of adjusters to evaluate and process claims after 9/11. Many of those we interviewed praised the insurance industry's quick response to claims and generous interpretation of their policies. Nevertheless, some problems with business-interruption insurance were reported, including significant disputes over business-interruption coverage and complaints about slow payments on business-interruption claims.

More than 85 percent of insurance payments went to businesses. Those who were killed or seriously injured received most of the remainder, with a small percentage going to those with residential property damage. Even in the first two groups, however, insurance payments were often modest compared with losses. Individuals usually carried small amounts of life insurance relative to their annual earnings. Many small businesses had very limited or no business-interruption insurance.

Without the huge insurance payments, the economic disruption caused by the attack on the WTC would have been much greater. Greater demands for assistance would have been placed on government and charities, and a greater portion of the losses likely would have been borne by businesses and their workers.

Government Programs

The government response went far beyond that seen in most disasters. While the amount of resources expended was unprecedented, performance of the various government agencies was uneven. Most interviewees positively assessed the response of the VCF, unemployment insurance, Medicaid, and Social Security programs to the crisis. On the other hand, the Federal Emergency Management Agency (FEMA) was roundly criticized by our interviewees, and by the media and other analysts, for their slow response, inflexibility in adapting programs to the particular circumstances of the attack on the World Trade Center, and its poor coordination with charities. Because FEMA's programs for responding to the broader economic impacts of a disaster are limited, FEMA was poorly suited to responding to a disaster with such large economic ripple effects on workers and businesses. Criticism has also been levied against the U.S. Environmental Protection Agency (EPA) and state and local environmental protection groups. Both our review of published material and perspectives obtained from interviewees indicate that these groups handled the pollution threats poorly.

Charity

Charities were commended by many of those we interviewed for responding quickly and for distributing substantial amounts of money in short order. In many cases, charities were able to mobilize staff and provide assistance more quickly than FEMA or other government programs were able to do.

Charities also identified needs that were missed by government and insurance programs. In particular, they provided assistance to undocumented workers, others who did not qualify for unemployment insurance, and small businesses. Charities also drew attention to—and provided important resources for—mental health needs, an area that prior to 9/11 had not been emphasized in federal disaster relief programs. Although charities were praised for identifying unmet needs, the largest charities were criticized by some observers for focusing too much of their resources on Lower Manhattan and paying too little attention to other parts of the New York City metropolitan region.

Coordination among and between charities and the government was poor, particularly right after the attack. The bigger charities did not talk to the smaller charities, and for many months there was almost no way one charity could know what an applicant had received from another charity. As a result of this lack of coordination, there were repetitious application forms and possible duplication of benefits. Charities should be credited for acknowledging the coordination problem and for setting up the 9/11 United Services Group to address the problem. Charities did not coordinate well with FEMA, although this was likely due as much to FEMA's communication strategy as it was to choices made by the charities.

The charitable response was strongly criticized by interviewees representing higher-income earners who were killed or seriously injured in the attack on the

WTC. They were resentful because, in their view, the charities had raised money on the pretext that it would be distributed to survivors of the dead and to the seriously injured, but, instead, large amounts of money were distributed to other victim groups. Charities were criticized by others, however, for going far beyond their traditional role of meeting basic needs (for which they required special exemptions from the Internal Revenue Service). Charities distributed large amounts of aid to the survivors of those who were killed and to the seriously injured, when arguably their basic needs were well met by the VCF.

Tort

Liability caps and the Victim Compensation Fund have limited the role of the tort system in providing compensation after 9/11, at least so far. Nearly all of the families of those who were killed decided to go through the VCF for benefits, and a large number of emergency responders who initially considered claims for respiratory injuries against the City of New York dropped those suits and applied to the VCF instead. Some tort cases are being pursued, however. Approximately 70 families are pursuing wrongful death cases; a class-action suit has been filed on behalf of site cleanup workers; suits have been filed against the EPA on behalf of residents and workers in Lower Manhattan and Brooklyn; and lawsuits have been filed by businesses, individuals, and the Port Authority of New York and New Jersey against the Saudi royal family, the Saudi government, and al Qaeda. It will be some time before solid estimates are available for the amount that will ultimately be paid out through the tort system.

System Performance by Victim Group

We assess the benefits provided to the various victim groups in terms of two fundamental goals for a compensation system: equity and economic efficiency. In most cases, we are not able to directly assess whether specific equity and efficiency goals have been or will be met; rather, we describe key equity and efficiency issues raised in the process of compensating various groups of 9/11 victims.

Corrective justice and distributional justice are two concepts of equity. If *corrective justice* is the goal, benefits are considered a means of correcting the wrong inflicted. *Full corrective justice* would require that benefits be equal to actual losses, both economic and noneconomic. *Distributional justice* refers to the fair distribution of benefits across beneficiaries, based on need or some other measure of merit. *Economic efficiency*, by comparison, calls for allocating productive resources to maximize the social value of what we as a society produce. Economic efficiency includes making sure that benefits are distributed with low administrative and other transaction costs, providing incentives to individuals and businesses to maximize economic activity,

and providing incentives to individuals and businesses to take appropriate security measures. Equity and efficiency goals may conflict with or work to reinforce each other, depending on the circumstances.

Civilians Killed or Seriously Injured

Almost all civilians who were killed or seriously injured³ in the 9/11 attacks decided to file claims with the VCF. Awards from the VCF ranged from \$250,000 to \$7.1 million and averaged \$2.08 million. Quantified benefits for the 2,551 killed and 215 seriously injured totaled \$8.7 billion, or an average of \$3.1 million per recipient, with 69 percent of total benefits coming from the VCF, 23 percent from insurance, and 8 percent from charity.

For those killed in the attacks, we evaluate economic loss in terms of the probable contributions the deceased would have made to his or her survivors should the deceased have lived. Economic losses are fully compensated if the financial situation of the survivors is the same as what would have been expected if the deceased had lived.

Certain features of VCF awards tended to increase compensation relative to economic loss. For example, the VCF did not deduct charity donations or the value of 9/11 tax benefits from its awards. Other features of VCF awards tended to decrease compensation relative to economic loss. For example, no payments were made for lost parental guidance, and some of the assumptions by the VCF likely underestimated lifetime earnings. The VCF capped annual income at \$231,000 in its projections of lifetime earnings and benefits, and the program rules stated that compensation based on income above this level would rarely be necessary to meet financial needs. However, the VCF special master had a large amount of discretion in setting awards for high-income earners. Unfortunately, data are not available on how he exercised that discretion. Insufficient data are available to determine the net effect of these various factors on the degree to which benefits compensated for economic losses, both for those killed and those seriously injured. Individual data from the VCF on projected lifetime earnings, collateral offsets, and awards are needed to evaluate how benefits received by the families of high-income earners compared with their economic loss.

Noneconomic damages are difficult to objectively quantify, and thus it is difficult to assess whether VCF awards for noneconomic damages covered full noneconomic losses. One comparison that can be drawn is between VCF awards for noneconomic damages and noneconomic awards from jury verdicts in aviation wrongful death cases, although care must be taken when making such comparisons because verdicts can be subsequently reduced, and the compensation in cases that go

³ We define *serious injuries* as physical injuries that resulted in hospitalization for one day or more in the immediate aftermath of the attack.

to trial is higher than that for all cases, most of which settle before trial. Nonetheless, we found that VCF awards for noneconomic damages were substantially lower than those from a sample of aviation wrongful death cases from the mid-1990s, suggesting that the VCF did not provide full compensation for such losses.

In terms of distributive justice, the compensation provided to civilians who were killed or seriously injured in the attack on the WTC raises fairness issues both within the set of individuals killed or seriously injured and between those killed or seriously injured and other groups of victims. First, tailoring payments to expected lifetime earnings meant that some families received considerably more than others. Those who received less wondered why the lives of their loved ones were less valued than those of others who made more money. It is not clear, however, that a more equal distribution of payments would have resulted in any less divisiveness among beneficiaries, given the complaints about the VCF from families of the highest wage earners. Second, concerns were raised by a substantial number of interviewees about the distribution of benefits across victim groups. None of those we interviewed disputed the tragic losses inflicted on those families whose loved ones were in the World Trade Center or the Pentagon or on one of the airliners that crashed on 9/11. However, some interviewees felt that a higher share of resources should have gone to other victim groups, such as workers or small businesses. Some interviewees noted that previous victims of terrorist attacks in the United States received no comparable set of benefits, that benefits for military personnel killed in the line of duty are nowhere near as large, and that no other set of crime victims in the United States has ever received this level of assistance from federal, state, or local authorities.

Turning to efficiency issues, all those we interviewed felt that the seriously injured and the survivors of the dead faced an enormously complex and confusing array of benefit programs. There was strong support among interviewees for more coordination among charities, nongovernmental organizations (NGOs), and government benefit programs and for a common benefits application form.

Further work is needed before the transactional efficiency of the VCF can be evaluated. Information has not yet been collected on the administrative costs of the VCF and the paid and donated services of attorneys representing claimants. It is difficult to imagine, however, that the VCF did not resolve claims faster and more efficiently than the tort system would have done given the size of the losses, the parties primarily responsible for the attacks, and the complicated liability issues surrounding the events of 9/11.

Emergency Responders Killed or Seriously Injured

Approximately 425 emergency responders were killed or seriously injured in the attack on the WTC. Nearly all filed claims with the VCF. In addition to their VCF settlements, these victims received an average of \$880,000 more in charitable contributions than did the survivors of civilians killed in the attack. As shown in Figure

S.1, approximately one-quarter of the \$1.9 billion in total benefits received by emergency responders came from charities. The large charitable gifts combined with other government benefits not available to civilians meant that an emergency responder killed in the attack likely received \$1.1 million more than a civilian with a similar economic loss. Evaluation of benefits in terms of corrective justice is not yet possible for emergency responders for much the same reason that it is not yet possible for civilians.

The comparatively large benefits received by emergency responders who were killed or seriously injured in the attack on the WTC raised questions of equity. Several interviewees argued that benefits were too high because preexisting salary and pension benefits accounted for the increased risk of death or serious injury on the job. More frequently, interview respondents did not argue that emergency responders were overcompensated relative to their losses, but rather focused on distributional inequities. Some interviewees wondered why emergency responders who were killed in the WTC attack received so much more in the way of benefits than did emergency responders killed in other settings. Others thought that emergency responders received too large a share of the total resources available to all categories of parties adversely affected by 9/11.

Environmental Exposures

Government agencies and charities set up several programs that provided health monitoring and health care services for people who suffered injuries from environmental exposures, but there were some significant shortcomings of the government response to the public health threats posed by the smoke, dust, and debris released during the collapse and cleanup of the World Trade Center, according to both published sources and interviewees. The division of responsibility among the EPA, FEMA, and state and local environmental protection agencies was not clear, and political interference compromised accurate communication of health risks after 9/11. Communication concerning appropriate cleanup procedures after the attack was also poor. A residential cleanup program was established, but the first homes were not cleaned until nearly a year after the attack. Public trust in environmental protection agencies was very low after 9/11.

Quantified benefits for those injured by environmental exposures totaled \$660 million, with 82 percent coming from the government and 9 percent each coming from insurance and charity. (The total amount and percentage provided by insurance would be higher if data on employer-provided health benefits and short- and long-term disability benefits were available.) The VCF provided benefits to those who were at the World Trade Center site during or soon after the attack and who suffered injuries that had surfaced by the time of the filing deadline for the VCF. Charities and government funded health monitoring, health care services, and indoor residential cleaning for others who suffered respiratory problems due to the WTC attack.

Further data on the utilization of these government and charity programs is required before any conclusions can be made about whether the health care and health monitoring needs of those affected by environmental exposures have been met. A major unknown is whether resources will be available to pay for health care for respiratory injuries that might appear in the future. Long-term health effects among emergency responders and site cleanup workers are the greatest concern. Employer-provided health care may be available to these groups, and they may also pursue benefits through the tort system.

The VCF made payments for economic and noneconomic losses to eligible claimants suffering respiratory injuries; however, data on individual economic and noneconomic awards were not yet available as of this writing. Those who were not eligible for the VCF may have recovered some lost wages or other economic losses through workers' compensation, disability, or other programs, but would have to recover noneconomic damages through the tort system.

The benefits for those who were injured from environmental exposures raise some distributional-justice issues within this victim group. Noneconomic damages were available for some with respiratory injuries, but not others. Also, it remains to be seen how benefits for those with latent injuries from 9/11 will compare with benefits for those with injuries that manifested themselves quickly.

Emotional Injuries

The effects of 9/11 on the mental health of New York City residents and workers were, by all accounts, extensive. Although the response by government and charities was unprecedented, it took some time for the key programs to be put in place. We were able to quantify \$210 million in mental health benefits, with 67 percent of those benefits provided by government, 19 percent by charity, and 14 percent by insurers. If dollar figures on mental health care covered by employer-provided health and employee-assistance plans were available, the percentage paid by insurance would be higher.

Generous charitable programs for both short-term and longer-term care augmented government programs and insurance for those with emotional injuries who lived or worked south of Canal Street. Utilization of charitable programs was lower than anticipated, perhaps indicating that demand was satisfied. However, further analysis of the implementation, accessibility, and utilization of the various mental health programs is required before conclusions can be reached about whether the mental health care needs of those who lived or worked below Canal Street were met. The treatment needs of those who lived or worked above Canal Street were likely satisfied to a lesser extent than the treatment needs for those below Canal Street. This population was not eligible for many of the charity benefits available in the first few months after the attacks, and delayed implementation of FEMA's Project Liberty—a program that provided free crisis counseling, education, and referral services to peo-

ple affected by the 9/11 attacks—may have meant that some immediate needs were not met. There was also a mismatch between the short-term nature of FEMA’s mental health programs and the long-term mental health impact of the 9/11 attacks, raising concerns that longer-term needs will not be met.

Victims who are or were emotionally injured may also have sustained economic losses (such as wage loss due to inability to work) and noneconomic losses (such as pain or suffering) due to their condition. Workers’ compensation and unemployment benefits covered at least part of the economic losses in some cases, but we are not able to determine to what degree they did. Benefits for noneconomic loss were not available from any of the mental health benefit programs.

The experience of 9/11 highlighted the short supply of mental health clinicians who are trained to treat disaster trauma and the need to assess what investments in mental health provider capacity should be made to prepare for the possibility of a future attack.

Residents

Quantified benefits not related to personal injury for residents of Lower Manhattan totaled \$920 million, with 54 percent provided by property insurance, 37 percent by government programs, and 9 percent by charity. Payouts by insurers to Lower Manhattan residents were substantial, charities mobilized quickly, and the federal government financed unprecedented incentives to induce individuals to remain in or move to Lower Manhattan.

Dollar figures are not available on how the benefits provided to residents of Lower Manhattan compare with their losses for property damage and additional expenses not related to personal injury, but individuals we interviewed for this study did not identify residents of Lower Manhattan as being undercompensated. The incentive programs for residents of Lower Manhattan did raise some distributional equity issues. Some interviewees criticized government programs for offering rent subsidies and other benefits to households that were not in Lower Manhattan at the time of the attack and for focusing too many resources on high-rent areas.

Efforts to bring back residents to Lower Manhattan address the efficiency goals of a compensation system. The aim of these efforts was to put underutilized housing resources back into use and to increase the overall level of economic activity in the area. The residential market in Lower Manhattan did recover, but it is difficult to discern the marginal effect the Residential Grant Program and other similar programs had on the recovery process. When evaluating the advantages and disadvantages of these revitalization efforts, the security ramifications of encouraging large numbers of people and businesses to return or relocate to Lower Manhattan should also be considered.

Workers

The events of 9/11 disrupted a highly integrated economy, and the economic ripple effects were far more wide-ranging and persistent than those from most disasters. The existing social safety net cushioned the losses to some extent. Unemployment insurance programs paid out substantial sums in New York City, and other programs were expanded, reflecting the perception that preexisting programs were not sufficient to respond to a disaster with such broad economic effects. Gaps in compensation for losses remained, however. Unemployment benefits did not cover full wage loss and were unavailable to undocumented workers and to those whose hours were reduced but who were not laid off after 9/11. The situation of immigrant workers, and especially undocumented workers, was a source of concern among those we interviewed. Charities attempted to fill in some of the gaps by allocating more than one-half billion dollars to workers economically affected by the attacks. Quantified benefits for workers totaled \$1.7 billion, with approximately two-thirds provided by government and one-third by charity.

Despite this extraordinary response, benefits for workers come up short when held to a standard of full corrective justice for economic losses. The social welfare system in the United States historically has not attempted to provide full compensation to workers affected by economic downturns or other adverse events. This limitation is by design, partly due to budgetary concerns and partly due to concerns that full compensation for job loss will reduce incentives to find new work.

The benefits provided to workers also raised questions of distributional fairness. Interviewees across a broad spectrum of stakeholder groups thought that workers were among the least well compensated of the victim groups. The dissatisfaction of many with the benefits available to workers was caused in part by raised expectations for assistance due to the large amounts paid by the VCF to those who were killed or seriously injured and the \$20 billion in federal aid earmarked for New York City after 9/11. Questions also arose over the distribution of benefits among workers. In the course of our interviews, dissatisfaction was expressed with the distinction between workers who were “directly” and “indirectly” affected by the attacks. The largest charities tended to focus their assistance on those who had worked in the World Trade Center or south of Canal Street, and many government programs initially focused on workers located in or near Ground Zero. Fewer resources were available to those in the metropolitan area who had worked outside Lower Manhattan.

The most important aspect of the compensation system for workers in terms of efficiency is that workers maintain strong incentives to get back to work. Full compensation works against such incentives, which illustrates one of the tradeoffs between equity and efficiency considerations that should be considered in designing systems for compensating losses from a terrorist attack.

Business

Businesses in New York City sustained major property damage, their operations were disrupted, and the customer base of many small businesses was decimated. Businesses received a tremendous amount of compensation, assistance, and services: \$23.3 billion, or 61 percent of the total quantified benefits paid to all victim groups. Insurance payments accounted for nearly 75 percent of the quantified benefits to businesses. While benefits were huge, business losses were undoubtedly even larger. Property damage to businesses in New York City totaled an estimated \$16 billion, but insurance payments for property damage came to roughly \$7.5 billion. Insurers made large payments on business-interruption and event-cancellation policies, but even so, lost profits caused by the attacks were not fully addressed.

Small businesses were poorly compensated for their losses. The government stepped in to cover some of the losses of small businesses that had not purchased insurance, but studies suggest that these programs covered only a modest portion of uninsured losses. Several factors made it difficult to reach small businesses: the slow realization by policymakers and the public that small businesses were in serious need of assistance, the difficulty in reaching the culturally diverse population of small-business owners, and the unattractiveness to small businesses of loans secured by personal collateral when the future of the Lower Manhattan economy was so uncertain.

From a distributional justice perspective, many of those we interviewed thought that small businesses were one of the least well compensated of the victim groups after 9/11. Many interviewees also thought that benefits to businesses could have been better targeted based on need. Some pointed out that most benefits programs were focused on businesses in Lower Manhattan, yet many small businesses throughout New York City and the metropolitan region were severely affected. One investigation found that a sizable proportion of monies from the World Trade Center Business Recovery Grant program for small businesses went to finance and law firms, firms that some observers suspected were in less precarious financial circumstances than other small firms.

From an economic efficiency point of view, the most salient aspect of business benefits was the unprecedented effort to revitalize Lower Manhattan. Programs targeted at economic revitalization amounted to \$4.9 billion, or approximately 20 percent of total business benefits. The economy of Lower Manhattan has largely recovered since 9/11, but it is difficult to determine the role that revitalization programs played in the recovery compared with the influence of general economic conditions. A full evaluation of the costs and benefits of revitalization efforts should include several considerations that are easy to overlook. First, the evaluation should consider the extent to which revitalization programs reduce incentives for businesses to buy terrorism insurance against losses from future attacks. Second, the impact of revitalization efforts on national security should be considered. Rebuilding Lower Manhattan may recreate a prime target for terrorists, and the evaluation of revitalization pro-

grams should also consider whether rebuilding Lower Manhattan is preferable to reducing its attractiveness to terrorists by encouraging businesses to disperse to suburban areas.

Moving Forward

The benefits received by individuals and businesses affected by the September 11 attacks were the result of a unique combination of insurance, tort, government programs, and charity. There is no guarantee that a similar mix of resources will be available for the victims of future attacks: Congress may not reauthorize the VCF for future attacks, purchase of terrorism insurance after 9/11 has been spotty even with the federal Terrorism Risk Insurance Act, and one cannot be sure that the charitable response will be so generous next time. There is also no general agreement in the public policy community on the role each mechanism should play in a compensation system for individuals and businesses affected by terrorist attacks. Analysis of the compensation system for losses from 9/11 suggests several issues that policymakers should consider as they formulate policies for compensation and assistance in the event of a future attack.

Issues Related to Personal Injury

Benefits for Those Killed or Seriously Injured. Discussion is needed on the extent to which those who are killed or seriously injured by a terrorist act should receive benefits that differ from those received by victims of other crimes or other adverse events. If there is a special obligation to compensate victims of terrorist acts, policymakers should consider how compensation for losses should be split between citizens and the government. A fixed flat amount of compensation, for example, would place the responsibility on high-income earners to purchase life insurance to cover losses above the government payment.

Benefits for Those Injured from Environmental Exposure. Potential exposure to hazardous substances raises a new issue in disaster response policy. Programs for cleaning up hazardous substances released by attacks and criteria for awarding government compensation to individuals who have been injured from environmental exposure should be evaluated. In particular, policies regarding compensation for latent injuries should be considered.

Benefits for Those with Emotional Injuries. Current government programs are not well suited to treating or providing compensation for long-lasting emotional injuries that may result from terrorist attacks. Consideration should be given to the costs and benefits of programs to address longer-term injuries and to efforts to increase the capacity of the mental health system to treat emotional injuries caused by terrorist attacks.

Issues Related to Financial Injuries

Programs for Workers Affected by a Terrorist Attack. Policymakers should consider the extent to which the existing social safety net provided by government programs should be augmented for those directly, and particularly for those indirectly, affected by an attack.

Benefits for Small Firms. Policymakers and policy analysts should consider whether equity or economic efficiency considerations warrant expansion of the benefits given to small firms after a major terrorist attack. The degree to which assistance programs should emphasize grants as opposed to emphasizing low-interest loans should also be considered.

Economic Revitalization Goals. The extent to which government programs should strive to restore economic activity in affected areas to pre-event levels should be considered in the policy debate over compensation for losses due to terrorist attacks. Domestic security should be factored into an analysis of the costs and benefits of revitalization efforts. For example, dispersing economic activity may reduce the number of attractive targets for terrorists but may also result in lower economic productivity.

Undocumented Workers' and Business Owners' Eligibility for Benefits. With the notable exception of the Victim Compensation Fund, undocumented workers and business owners were excluded from most government assistance programs after 9/11. Many people in these groups were in precarious situations financially before 9/11 and fell into dire financial straits after the attacks. Policymakers should consider whether undocumented workers and business owners warrant special treatment following a large-scale terrorist attack, or whether the needs of these groups should be left to charity to satisfy.

Issues Regarding the Role of and Coordination Among the Four Compensation Mechanisms

The Role of Insurance. Policymakers and policy analysts should consider goals for the role insurance should play in a terrorism compensation system and evaluate what policies would best achieve the agreed-upon goals. For example, the goal may be for losses to be covered primarily by insurance payments. To achieve such a goal, the federal government might require all property/casualty insurance policies to cover terrorism losses (as is done in France and Spain). Alternatively, terrorism insurance might be viewed as a supplement to government-provided benefits. For example, the government might provide modest payments for business interruption after a terrorist attack and then leave it up to businesses to purchase supplemental business-interruption insurance.

The Role of Liability. If no restrictions are placed on tort remedies, and absent an attractive government program for compensating losses, the tort system may be the primary means available to businesses and individuals for recovering losses in the

event of a future terrorist attack. Thought needs to be given to what the appropriate role of liability should be in such an event. The main disadvantage of tort in recovering losses from terrorism is that the parties primarily responsible for the damages probably lack the resources to compensate victims or are beyond the reach of U.S. courts. Tort liability, however, may create incentives for firms to adopt security measures that reduce the vulnerability of their employees and customers to terrorist attack. Security implications thus should be considered when evaluating the role tort should play in a terrorism compensation system.

The Role of Charity. As policies on terrorism compensation are developed, thought should be given to the role that charities should be expected to play in future attacks. By reducing suspicions about how funds will be spent, a widely accepted role for charities may make it easier for them to raise funds in the future. The key issue for charities is whether they should move beyond their traditional role of giving to meet basic needs and instead compensate victims for some or all of the losses caused by a terrorist attack. Policymakers and policy analysts should evaluate how to best take advantage of the ability of charities to distribute aid quickly, to contact difficult-to-reach populations, and to fill gaps left by other compensation mechanisms.

The Extent to Which Programs Should Be Established and Funded in Advance of or After an Event. Compensation programs can be set up and funded before an event, decided on after an event, or some mix of both. Setting up government compensation programs in advance of a terrorist attack may encourage individuals and firms to determine how they will cover losses that would not be covered by government programs and may strengthen arguments against the creation of additional compensation programs after an attack. Terrorism insurance contracts in effect set up compensation in advance by precommitting resources to be expended in the event of a terrorist attack. Such precommitments by government programs or insurance contracts can also have a downside. They reduce the ability of government, and society more generally, to allocate resources to meet the most pressing needs after an attack. Policymakers should examine the extent to which committing resources in advance serves broad social goals.

Coordination and Sequencing of Compensation Mechanisms. Poor coordination of benefits within and among compensation mechanisms was identified as a problem in our assessment of the benefits received by each 9/11 victim group. Policymakers need to address how such coordination might be improved. Increased coordination will not necessarily come cheaply, however, and its costs must be considered along with its benefits. One approach to improving coordination among benefit mechanisms is to impose a sequence on the order in which government, charity, and perhaps insurance would act in providing benefits. Policymakers and stakeholders more generally should evaluate the advantages and disadvantages of various sequences.

Setting Priorities

The issues discussed above are complex and interrelated. Compensation options should be evaluated in light of the overall goals for the compensation system. Policy analysis can contribute to the decisionmaking process by examining how different options measure up against the various concepts of equity and the extent to which they promote economic efficiency. Domestic security is a particularly important component of overall economic efficiency in this context, and policy analysis can also help policymakers to better understand how domestic security is affected by various compensation approaches. Choosing among alternatives will involve tradeoffs between equity, economic efficiency, and domestic security, and it will be up to policymakers to determine the relative importance of each of these goals.

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Acronyms

ATSDR	U.S. Agency for Toxic Substances and Disease Registry
ATSSA	Air Transportation Safety and Stabilization Act
BRGP	(World Trade Center) Business Recovery Grant Program
DOJ	U.S. Department of Justice
DRM	Disaster Relief Medicaid
D&SI	dead and seriously injured
DUA	Disaster Unemployment Assistance (FEMA)
EIDL	Economic Injury Disaster Loan
EPA	U.S. Environmental Protection Agency
ESDC	Empire State Development Corporation (New York State)
FEMA	Federal Emergency Management Administration
GAO	U.S. General Accounting Office
HUD	U.S. Department of Housing and Urban Development
IFG	Individual and Family Grant program (FEMA)
IRS	Internal Revenue Service
LMDC	Lower Manhattan Development Corporation
LMSBWRP	Lower Manhattan Small Business and Workforce Retention Project
MRA	Mortgage and Rental Assistance program (FEMA)
n.d.	no date
NFIP	National Flood Insurance Program
NGO	nongovernmental organization
NYC	New York City
NYCEDC	New York City Economic Development Corporation

OVC	Office for Victims of Crime, U.S. Department of Justice
PTSD	post-traumatic stress disorder
SBA	U.S. Small Business Administration
SFARGP	(World Trade Center) Small Firm Attraction and Retention Grant Program
TEUC	Temporary Extended Unemployment Compensation program
TIV	total insured value
TRIA	Terrorism Risk Insurance Act
VCF	September 11th Victim Compensation Fund of 2001
WTC	World Trade Center

Introduction

Background

The terrorist attacks of September 11, 2001, caused tremendous loss of life, property, and income. The response of private insurers, charities, and the federal government to the losses of individuals and businesses was on a scale and of a scope never before seen.

Private insurance payments are expected to be the largest for any single-event loss in U.S. history and far in excess of the losses for any other terrorist-related event. Estimates of insured losses from 9/11 are as high as \$32.5 billion (Hartwig, 2004a), over 50 percent more than the \$20 billion in insured losses resulting from 1992's Hurricane Andrew, the second-largest single-event insured loss in U.S. history (Tillinghast-Towers Perrin, 2001). Insured losses from the September 11 attacks were also more than 30 times larger than the next-largest insured loss from a terrorist attack, the \$907 million from a bomb attack in London in April 1993 (Swiss Reinsurance Company, 2002, p. 3).

The extent of the charitable response to the September 11 attacks was just as unprecedented. According to a number of surveys, nearly two-thirds of American households made financial contributions to charities for victims of the September 11 attacks (The Center on Philanthropy at Indiana University, 2003),¹ and charitable donations exceeded \$2.9 billion (Renz, Cuccaro, and Marino, 2003, p. 19).² No other event in U.S. history has generated anything close to this level of philanthropic giving (Seessel, 2002b, p. 1).

The federal government promised \$20 billion to help the New York City area recover from the attacks (U.S. General Accounting Office [now the Government Ac-

¹ The survey was conducted from October 22 to November 28, 2001. The Center on Philanthropy also reported that a USA Today/CNN/Gallup poll conducted on December 14–16, 2001, found that 64 percent of respondents reported making contributions to charities for 9/11 victims.

² This figure includes contributions raised by 40 of the largest September 11 relief funds. More than 350 relief funds were created after 9/11 to aid victims, their families, and other persons and communities affected by the disaster. Funds raised by these 40 organizations account for the vast majority of the total (Renz, Cuccaro, and Marino, 2003, p. 19).

countability Office], 2003b, p. 15). It also distributed \$5 billion to the airlines and offered loan guarantees. Significantly, Congress moved quickly to limit the use of the tort system for recouping losses caused by the attacks. Congress capped the liability of airlines, airports, and local governments to existing insurance coverage limits and required all lawsuits to be filed in federal court. In return, Congress established the September 11th Victim Compensation Fund of 2001 (VCF) to provide compensation to the families and dependents of those killed and injured in the immediate aftermath of the attacks.

These measures were adopted quickly with little time for reflection, analysis, or coordination. President Bush pledged \$20 billion to rebuild New York City in the days immediately following the attacks, and the VCF and tort restrictions were signed into law 11 days after the attacks. Charities raised hundreds of millions of dollars before the VCF was enacted into law, and because of the way the fund-raising campaigns were crafted, some major charities had less flexibility than usual in how they could spend the funds.

The tort restrictions, the VCF, and the tremendous government incentives to revitalize the New York economy applied solely to the events of 9/11. Charities received special dispensations from the Internal Revenue Service, which allowed them to distribute money to the families of those killed in the attacks, regardless of their need. In addition, there is no guarantee that insurance coverage will be as widespread in the event of a future attack.

The Policy Problem

Because the response to the losses from the 9/11 attacks was for the most part event-specific, it does not provide a plan for the future. Nor is there general agreement on what role the four basic mechanisms of the compensation system—insurance, the tort system, government, and charity—should play in providing assistance and compensation for injury and financial loss due to terrorist attacks.

Future large-scale terrorist attacks may occur in the United States. We as a society need to consider what approach should be taken to assist and compensate individuals and businesses that suffer injury and financial loss in the event of a future attack and what public policies and programs are needed to further that approach.

Purpose of This Study

This report describes compensation and assistance provided to individuals who were killed or injured in the September 11 attacks. It also describes compensation to those who suffered emotional injuries, those who suffered injuries due to environmental

exposures, residents who were displaced from their homes, businesses that were destroyed or weakened, and workers who lost income or their jobs in New York City due to the attack on the World Trade Center (WTC).³ Previous studies have focused on specific pieces of the compensation system, such as the performance of various charities, the September 11th Victim Compensation Fund, and the Federal Emergency Management Administration (FEMA). We provide an overview of the benefits provided by the entire compensation system, including private insurance, the federal government, charities, and the tort system. Our purpose is threefold: (1) to provide an historical record of the benefits that were provided as a result of the September 11 attacks, (2) to assess the performance of various parts of the compensation system, and (3) to identify the issues raised by 9/11 that should be addressed in developing policies for compensation and assistance for future terrorist attacks.

In this study, we focus our attention on New York City because it is the community that clearly suffered the most from the attacks. We describe the benefits that were made available to various groups of victims and quantify the benefits where possible. We were not able to develop comprehensive estimates of the losses suffered by the various groups of victims or to determine the percentage of losses that were covered by the various benefits programs. However, we do use available information and interviews with knowledgeable stakeholders in New York City to provide qualitative descriptions of which groups of victims were better or more poorly served relative to their losses. Because well-developed programs are in place to provide assistance to state and local governments for cleanup and rebuilding after a disaster, we restrict our attention to the benefits that were made available to individuals and businesses.

Organization of This Report

In Chapter Two, we define key terms, lay out the framework for our analysis, and describe our research methods. Chapters Three through Seven present our findings on the postdisaster experiences of the major groups of victims. Chapters Three and Four focus on benefits to those who were injured (either physically or emotionally) or killed by the attacks. Chapter Three details and assesses benefit programs for civilians and for emergency responders who were killed or seriously injured. Chapter Four examines programs available to those who suffered injuries from exposure to smoke and dust that were released during the collapse of the WTC and subsequent

³ Although other individuals and businesses across the country suffered financial losses from the events of 9/11, this report focuses on financial losses in the New York City area after the attacks. In this report, we use the term *attacks* to refer collectively to the plane crashes at the World Trade Center and the Pentagon and in Shanksville, Pennsylvania. When examining benefits and financial losses in New York City, we use the term *attack* or *attack on the World Trade Center (WTC)*.

cleanup of the site, and to those in New York City who suffered emotional injuries from the attack.

Chapters Five and Six examine benefits that were provided to individuals for losses not associated with personal injuries. Chapter Five examines reimbursement for property damage and additional expenses incurred by residents of Lower Manhattan⁴ as a result of the disaster. Chapter Six turns to the broader economic effects of the attack on the World Trade Center. It examines benefits to workers in New York City, and their families, who lost jobs or suffered a substantial decline in income.

Chapter Seven examines the programs available for compensating losses incurred by New York City businesses due to the events of 9/11. Those losses include property damage and losses in revenue and profits. We examine the experiences of large and small firms separately because the effects of the attack on the WTC and the available benefits varied widely for the two groups.

Chapter Eight concludes the report by addressing the benefits identified in the previous five chapters and analyzing them from several points of view. It also summarizes the roles played by each of the four compensation mechanisms—private insurance, the tort system, government programs, and charitable giving. Finally, it raises fundamental issues that policymakers should address when they consider possible compensation approaches the country might take in the event of another major terrorist attack.

⁴ We use the term *Lower Manhattan* to refer to the area south of Canal Street (see the map and discussion in Appendix D).

The Compensation System, Terminology, and Research Methods

In this chapter, we first discuss the compensation system for providing benefits to individuals and businesses and sensible goals for such a system. We then define various types of losses relevant to this analysis and describe the victim groups that suffered losses after the September 11 attacks. We also define benefits-related terminology used in this report. Finally, we describe the research method, including the interview protocol, used in this study.

The Compensation System

The “compensation system” is the system of institutions, programs, and policies that provides benefits to individuals or businesses harmed by some act or event. The compensation system in the United States is composed of four basic mechanisms:

- insurance
- the tort system
- government programs
- charitable giving.

Insurance includes first-party insurance, such as life or property insurance, purchased by a policyholder to cover his or her own losses. Insurance can also take the form of third-party insurance that covers losses to others caused by the actions of the insured. The tort system (referred to as “tort” in this report) allows injured parties to recover damages in court from those responsible for their injuries. Third-party insurance often finances the payments made through the tort system. Federal, state, and local governments provide assistance and compensation through many different types of programs. Charities are private organizations that distribute benefits to various populations in need, depending on each charity’s mission. Appendix A has more-detailed descriptions of each of the four compensation mechanisms.

The role that each compensation mechanism plays in society varies by the type of injury or loss. For example, the tort system and life insurance are the primary

mechanisms that provide benefits to individuals who are killed or injured in commercial aviation accidents. In contrast, tort does not play a major role in compensating losses caused by floods. Instead, flood insurance, FEMA disaster assistance programs, and charities, such as the American Red Cross, provide benefits. It may be stating the obvious, but in the absence of benefits from insurance, tort, the government, or charity, the business or individual (and perhaps his or her extended family or community) must bear the loss.

Goals for a Compensation System

The goals for a compensation system are typically framed in terms of equity and efficiency.

Equity

Equity can be defined in many different ways. Some tort scholars argue for equity goals in the form of *corrective justice* (see Hensler, 2003; Fletcher, 2002). If corrective justice is the goal, benefits are paid to correct the wrong. Full corrective justice would require that the benefits equal the actual losses. Losses would have both economic (e.g., health care costs, lost wages) and noneconomic (e.g. pain and suffering) components. *Distributive justice* addresses the way in which the state, or another organization, distributes assets across possible claimants (Fletcher, 2002, p. 287). Several different principles have been advocated for distributive justice. Benefits might be allocated equally across injured parties, according to need, or based on contribution (Hensler, 2003, pp. 423–426). As an example of the latter, rescue workers might merit higher compensation than others who died in the attack on the WTC because they risked their lives to save others. A third type of justice or fairness that falls under equity goals for a compensation system is *procedural justice*. Procedural justice refers to the process by which claims are evaluated and resolved.

Economic Efficiency

For economists in particular, a primary goal of a compensation system is that it promotes economic efficiency. *Economic efficiency* calls for allocating resources to maximize the social value of what we as a society produce. In the context of terrorism, it is useful to consider three different aspects of efficiency:

- Whatever compensation is to be provided, efficiency requires that the transfer of resources be done using the least resources possible. Administrative, legal, and other transaction costs should be minimized. This type of efficiency can be thought of as transactional efficiency. Benefits should also be paid to those actu-

ally injured by the attacks and not to others who experienced losses for other reasons (targeting efficiency).

- The compensation system should provide incentives to individuals and businesses to maximize society's current and future standards of living (Garber, 1998, pp. 241–242). Idle resources should be put back to work (although not necessarily in the same place as they were before), and workers should be provided appropriate incentives to return to work or to find new jobs.
- The compensation system should also provide incentives to individuals and businesses to take appropriate security measures. Optimal security does not necessarily mean that the risk of losses from terrorist events should be minimized. Rather, the costs and benefits of certain actions should also be considered when making decisions on what types of security measures to adopt.

Equity and efficiency can conflict or work synergistically with each other. For example, unemployment compensation programs that cover only a fraction of lost wages may promote efficiency by encouraging people to go back to work but may provide only limited compensation for losses. On the other hand, programs that provide incentives to firms or residents to remain in Lower Manhattan can promote efficiency by returning assets to productive use and can also partially compensate losses due to the attack on the World Trade Center.

Types of Loss

Our analysis of the benefits for individuals and businesses harmed by the 9/11 attacks addresses three basic types of loss: death and personal injury, property damage, and income loss. We also examine incentives for the economic revitalization of Lower Manhattan. In this section, we briefly describe each of the types of losses in the context of the attacks.

Death and Personal Injury

Death and physical injury resulted from the attacks itself, from attempts to rescue individuals injured by the attacks, and by longer-term effects from exposure to dust, debris, or toxic materials that were released by the collapse of the WTC or during subsequent cleanup efforts. The attacks also caused emotional injury. Examples of this type of personal injury include anxiety, depression, and post-traumatic stress from experiencing the attacks and its aftermath.

Losses associated with personal injury and death can be split into economic losses and noneconomic losses. Economic losses include medical costs, funeral expenses, lost wages, the value of lost parental guidance, and the replacement of services that the deceased or injured contributed to a household. Noneconomic losses, in the

case of the 9/11 events, include pain and suffering due to injury, or pain and suffering that were experienced in the minutes or hours between the attacks and death. Pain and suffering also may be associated with emotional injuries. Noneconomic losses also include loss of companionship and consortium by the survivors of the deceased. Noneconomic losses are more difficult to monetize than economic losses.

Property Damage

Property damage suffered by individuals includes damage to real property such as residences and land and to personal property such as furniture, clothing, or automobiles. Business property damage includes damage to buildings, equipment, and inventories. In the case of 9/11, the damage may have been caused by the collapse of the World Trade Center or the by release of dust, smoke, and debris resulting from the collapse. While replacement or repair costs for property that is lost or damaged is often easy to value, the value of sentimental items can be difficult to determine.

Income Loss

Individuals suffered income losses after the attacks that were not associated with death or personal injury, but which were due to job losses or reduced work hours. Reduced-wage income was both directly and indirectly caused by the attacks. Examples of direct effects include layoffs by businesses located in the WTC and by restaurants in the “Frozen Zone” around the WTC that experienced a drop in business due to restricted street access. Indirect effects include layoffs at businesses that sold goods and services to firms directly affected by the attack on the WTC or that relied on those firms for key inputs. Losses due to unemployment and underemployment include wages that are foregone until an individual finds a new job or replaces his or her lost hours; these losses also include any reduction in pay at a new job.

Business profits declined for a number of reasons. In some cases, profits fell because production was curtailed due to physical damage to equipment, injury to personnel, or government actions that, for example, restricted access to a business’s property.¹ Profits also declined due to reduced demand for a business’s product. Finally, business profits declined because of extra business costs stemming from the attacks—e.g., the cost of increased security or the cost of hiring experts to reconstruct records damaged in the attack.

Economic Revitalization

Economic revitalization programs after 9/11 included incentives for residents or businesses to relocate to or remain in Lower Manhattan. Residents were given rent subsidies and lump-sum payments for remaining in or moving to the area. Businesses

¹ We categorize loss of the use of property as “income loss.”

were given tax incentives as well as payments for signing leases on real estate in Lower Manhattan.

Victim Groups

The findings presented in this report are organized according to the various groups of 9/11 victims:

1. Civilians who died or who were seriously injured
2. Emergency responders who died or who were seriously injured²
3. Those who suffered injuries due to exposure to smoke, dust, and debris released as a consequence of the collapse and cleanup of the WTC
4. New York City residents or workers who suffered emotional injuries
5. Residents of Lower Manhattan who were displaced from their residences or who suffered property damage
6. Workers in New York City who were economically affected
7. Businesses in New York City that were negatively affected.

We discuss the experience of emergency responders separately from the experience of civilians who were killed or seriously injured because the benefits available to the two groups were quite different. Likewise, we examine those who suffered death and serious physical injury separately from those with other personal injuries because the assistance and compensation available to the two groups were very different.

The first four victim groups listed above all suffered death or personal injury. The remaining three groups suffered property damage or lost income. Some individuals affected by the attacks fall into more than one of the first six groups (businesses only are in the seventh group). For example, a survivor who suffered acute anxiety and depression after the attack on the WTC might also have been displaced from his or her apartment in Lower Manhattan or lost his or her job because of the attack. For individuals belonging to multiple victim groups, our analysis separately examines their experiences after 9/11 as members of each of the different victim groups.

² We define *serious injuries* as physical injuries that resulted in hospitalization for one or more days immediately after the attacks.

Benefits Terminology

“Compensation,” “assistance,” and “services” are terms commonly used to describe benefits provided to individuals and businesses affected by 9/11. The terms are sometimes used interchangeably and sometimes have very different meanings depending on how they are used.

Charities typically think of themselves as providers of assistance. Their goal is to help people to get back on their feet after a disaster and to provide basic needs (such as food, housing, and clothing) until those people are able to resume their normal lives. Senior managers that we interviewed at charitable organizations said that the term *compensation* usually implies that an individual is “made whole” (i.e., receives full compensation) through monetary payments. The charitable community resists using this term because typically it is not the intention or goal of charitable organizations to provide full compensation for losses.

Advocates for crime victims, on the other hand, generally use the term *compensation* to refer to monetary payments to an injured party. The monetary payments made by government-sponsored crime-victim programs in the United States are usually quite modest and rarely make victims “whole.” The crime-victim support community uses the term *assistance* to refer to services (such as mental health counseling or job training) that are provided to crime victims.

In a tort setting, *compensation* is generally used to describe payments awarded to plaintiffs. Awards through the tort system generally aim to restore an injured party to his or her pre-event state (less legal costs) and thus constitute “compensation” in the same way that charities generally define compensation.

In this report, we use *compensation* to refer to monetary payments that are intended to replace losses, either in whole or in part, caused by the 9/11 attacks. We use the term *assistance* to refer to either monetary payments or services intended to help a business reopen or remain in operation or to help an individual get back on his or her feet, but this assistance is not intended to compensate for losses. We use the term *services* to describe noncash benefits, such as mental health counseling or job training.

From a practical standpoint, the distinction between the terms compensation and assistance is often blurred. For example, reimbursement for the cost of temporary housing for displaced residents might be considered assistance, but, in effect, such assistance also provides compensation for part of the losses caused by the disaster. To avoid confusion over differing interpretations and nuances of compensation and assistance, we use the term *benefits* to describe the money and services provided to individuals and businesses affected by the September 11 attacks. The term does not denote whether the intent of the monies or services was to compensate for past losses or to cover basic needs; neither does it denote whether the recipient was made whole.

Research Methods and Limitations of Analysis

Our analysis of the scale, scope, and success of the benefits provided to the seven victim groups affected by the September 11 attacks is based on data from a number of sources. First, the analysis is based on interviews completed in fall 2002, coinciding with the first anniversary of 9/11. We interviewed more than 50 senior individuals in 39 organizations representing the major stakeholder groups affected by the attacks. These groups include

- insurance firms and organizations
- plaintiff attorneys representing the dead, the seriously injured, and emergency responders
- congressional staff
- government agencies and departments (Fire Department New York [FDNY], New York Police Department [NYPD], The Port Authority of New York and New Jersey, the U.S. Small Business Administration [SBA], September 11th Victim Compensation Fund, City of New York, State of New York)³
- charities and nongovernmental organizations (NGOs)
- small-business organizations
- large-business organizations
- senior managers at business firms with the most significant personnel losses
- victim advocacy groups
- family members of the deceased.

The number of groups, organizations, or individuals we interviewed in each stakeholder category is listed in Table 2.1. The organizational affiliations of the individuals we interviewed are listed in Appendix B. Most interviews were conducted in person; some were conducted by phone. The in-person interviews were conducted in New York City or Washington, D.C. Interviews typically lasted one hour to 90 minutes. To encourage candor, the interviews were conducted on a confidential basis, although all participants agreed to allow their organizational affiliations to be identified in this report.

Our interview protocol focused on the interviewees' perspectives on losses suffered and compensation available after 9/11 and also addressed the respondents' views on what kinds of compensation policies should be put in place in the event of future attacks. In addition to these interviews, we conducted an extensive literature review for each of the major victim categories. We focused on reports by government

³ The only government agency that refused our requests for an interview was FEMA.

Table 2.1
Number of Organizations Interviewed, by Stakeholder Category

Category	Number of Organizations
Insurance firms and organizations	3
Plaintiff attorneys	4
Congressional staff	3
Government agencies and departments	9
Charities and NGOs	7
Small-business organizations	2
Large-business organizations	1
Business firms with the most significant personnel losses	2
Victim advocacy groups	8
Total	39

NOTE: Multiple individuals were interviewed at some organizations, and some of those who were interviewed were family members of the deceased.

agencies, charities, and insurers, as well as media coverage, primarily coverage in New York City newspapers. We reviewed industry publications, such as those that addressed the impact of 9/11 on various segments of the insurance markets, and consulted with experts on insurance and compensation issues.

In the following chapters, we first provide an overview of the extent and nature of losses for each of the victim groups. Second, we outline the benefits made available to each group through the four compensation mechanisms, and third, we provide an assessment of the benefits vis-à-vis equity and economic efficiency. The assessment draws on the observations of the interviewees and from the relevant literature.

The scope of this study did not allow us to exhaustively consider all aspects of economic efficiency. Therefore, we focus on the implementation and coordination of programs and incentives to get the New York economy up and running again. The broader relationship between the compensation system and business-risk management, and a more detailed examination of the compensation mechanism as it relates to domestic security, are left to future work. We also do not address procedural justice issues in this report.

We attempt to quantify the benefits provided to each of the victim groups by each of the compensation mechanisms. Quantifying benefits such as these is very challenging. A large number of programs and institutions provided benefits, and we did not have the resources to develop a detailed estimate of the benefits each one provided. In some cases, we were unable to develop any sort of benefit estimate. For example, we were not able to estimate the outlays by private health insurers for treatment of respiratory injuries or mental health counseling. In other cases, we were able to develop only a broad range into which the monetary expenditures likely fell.

Our goal is to estimate the rough magnitude of the amounts paid through the four compensation mechanisms to the various victim groups. To that end, we use available information to develop a best guess of the benefits from each source. We do not have enough information to develop ranges or statistical confidence intervals for most or all of the benefits estimates. Because we are not able to make even a best guess for some benefit programs, our benefit summaries capture only those benefits that could be quantified. In the discussions on benefits in the following chapters, we make note of the important benefits that are missing from our estimates. Even with the missing components, we believe that our analysis provides significant insight into the overall level and distribution of benefits across victim groups.

In this analysis, we focus on the amount distributed to the victim groups and do not consider administrative costs. Charities and government agencies often report only the amounts distributed and do not include the associated administrative overhead. Many charities promised to cover their administrative costs for 9/11-related relief efforts from sources other than donations solicited after 9/11. Estimates of insured losses typically include so-called loss-adjustment costs for claim processing, claim adjustment, and litigation, and we make adjustments to estimate the amount paid to policyholders.

Economists typically discount benefit payments that will be made in the future back to the present. Such discounting allows the comparison over time of programs that have different expenditure profiles. Benefits paid subsequent to 9/11 were made at various points in time, but we do not have the information to reliably discount those payments to the present. Thus, our estimates are in current (undiscounted) dollars.

When reporting payments made by various programs, we attempt to distinguish payments stemming from the 9/11 attacks from those stemming from other causes. For example, we estimate the fraction of total unemployment benefits paid in New York City after 9/11 that were due to the attack on the WTC as opposed to the general economic downturn at the time of the attack. However, we do not attempt to estimate the difference in program benefits due to the attacks over a victim's lifetime. For example, those who were killed in the attacks and who received Social Security death benefits presumably would have received Social Security retirement benefits had they not been killed. We do not attempt to calculate the difference in such benefit payments. Our benefits estimates, thus, capture payments triggered by the attacks, but not the increase (or conceivably decrease) in lifetime payments due to the attacks.

Benefits for Those Who Died or Were Seriously Injured in the September 11 Attacks

This chapter examines the benefits available to those who died or were seriously injured as a result of the September 11 attacks. As stated earlier, we define *serious injuries* as physical injuries that resulted in hospitalization for one day or more in the immediate aftermath of the attacks. Benefits for injuries due to inhalation of smoke and dust released by the collapse of the World Trade Center and cleanup of the site that did not result in hospitalization in the immediate aftermath of the attacks are discussed in Chapter Four, which also discusses benefits for emotional injuries.¹ In this chapter, we examine the benefits for emergency responders separately from those for civilians because the benefits available to one group are very different from those available to the other.

Benefits for Civilians Who Died or Were Seriously Injured

In this section, we first summarize the losses, in terms of fatalities and injuries, from the events of 9/11. We then review the benefits from insurance, the tort system, government programs including the September 11th Victim Compensation Fund of 2001, and charity that were paid to civilians who were killed or seriously injured in the 9/11 attacks. Finally, we summarize the benefits and then assess the equity and efficiency of those benefits.

Overview of Losses

A total of 2,752 people were killed by the attack on the WTC (NYC Medical Examiner's Office, 2004). Of those, between 415 and 438 were emergency responders (depending on how inclusive a definition of emergency responder one uses). Forty people were killed when United Airlines Flight 93 crashed into a field in Somerset County, Pennsylvania, and 184 people were killed when American Airlines Flight 77 crashed into the Pentagon. In all, 2,976 deaths were caused by this tragedy. In the

¹ Our addressing respiratory and emotional injuries in a separate chapter should not be taken to imply that none of those injuries were serious.

analysis that follows, we approximate the number of emergency responder deaths at 425 (the midpoint of the 415 to 438 range), with the result that civilian deaths totaled 2,551. Estimates of the number of undocumented immigrants killed in the attacks range from 60 to 200.²

According to a McKinsey & Company study completed in June 2002, 63 percent of the deceased left behind a spouse, and 56 percent of those spouses were not employed at the time of the attacks. Average household income for families of the deceased, including income from charitable donations and government assistance, fell 40 percent between 2001 and 2002 (McKinsey & Company, 2002, p. 12).

Serious injuries never reached the levels that were predicted in the early hours after the attacks. A total of 133,000 individuals contacted American Red Cross health volunteers in New York City between September 11, 2001, and April 2002. Of these, 404 had ongoing health needs, 57 were deemed to be catastrophically injured, 227 were expected to have ongoing needs for three to five years, and 120 were thought to require services for one to two years (Lowry, 2004b). Based on these numbers, we estimate that approximately 250 people were hospitalized for one day or more as a direct result of the attacks. In the analysis that follows, the percentage of the 250 civilians who were seriously injured in the attacks is assumed to mirror the percentage of the total killed who were civilians (86 percent). Table 3.1 summarizes the results.

We next describe the role that each of the four compensation mechanisms—insurance, tort, government programs, and charity—played in compensating those killed or seriously injured due to the attacks.

Insurance

Life Insurance. According to senior managers at firms that suffered significant losses and the plaintiff attorneys who were interviewed for this study, few of those who died

Table 3.1
Number of People Who Were Killed or Seriously Injured in the September 11 Attacks

	Number Killed	Number Seriously Injured	Total
Civilians	2,551	215	2,766
Emergency responders	425	35	460
Total	2,976	250	3,226

² A staff member of the September 11 Victim Compensation Fund believes that at least 60 of those killed in the attacks were undocumented immigrants (Brios, 2004); Stewart (2003) believes the number is no more than 200.

in the September 11 attacks carried life insurance that was substantial relative to lost lifetime earnings.³ Even high-wage earners with spouses and dependents typically carried life insurance that was not substantial relative to lost lifetime earnings, whether the insurance was purchased directly or through employers.

It was consistently reported to us from both insurers and representatives of insureds that life insurance benefits were paid promptly and in full. In fact, a number of the firms affected by 9/11 reported that corporate insurance carriers paid out on multiple lines of coverage, including lines for which the insureds were not strictly eligible (for example, some paid on travel coverage even when the insured was killed at his or her workplace).

Projected Life Insurance Benefits. Precise estimates of life insurance payments to those killed in the September 11 attacks are unavailable. The Insurance Information Institute expects payments and claims adjustment expenses for group and individual life insurance policies to total \$1 billion (Hartwig, 2004a). Total payments of \$1 billion amount to average payments of \$350,000 per deceased civilian after 10 percent of the amount is deducted for loss-adjustment expenses. It is important to note, however, that life insurance payments undoubtedly varied dramatically across those who were killed.

Workers' Compensation. Workers' compensation programs in New York and New Jersey, and the workers' compensation program for federal employees, paid benefits to workers killed or injured in the attacks. Death benefits were paid to those persons who were killed at work or killed while attempting to leave work.

The New York workers' compensation program pays a widowed spouse with one child \$11,660 a year (tax free) if the worker earned \$24,000, with benefits rising to \$14,050 a year for a worker who earned \$48,000 a year. At higher incomes, the benefit drops after adjusting for Social Security benefits, so that the program pays about \$12,300 if earnings were \$90,000 (National Academy of Social Insurance, 2002b). Benefits are paid for life or until remarriage. Children are entitled to death benefits until they turn 21 (or 23 if they are full-time students). In New York, a flat payment of \$50,000 is made to the estate of an employee who leaves no dependents. There is no such payment in New Jersey. In both states, up to \$6,000 is available to cover funeral expenses (New York Committee for Occupational Safety and Health, 2001).

The September 11th Victim Compensation Fund considered the workers' compensation benefits that were paid before it made an award as a collateral source and deducted those benefits from its award. Benefits that were expected to be paid after

³ A 1999 study on the adequacy of life insurance found that almost 33 percent of wives and more than 10 percent of husbands would have suffered living-standard reductions of 20 percent or more if their spouses had died in 1992 (Abraham and Logue, 2003, p. 609). These averages may not be applicable to those who died in the 9/11 attacks.

the VCF award was paid, and that were contingent on the actions of the beneficiary (e.g., remarriage) and thus could not be predicted, were not deducted from the VCF award.

Through September 11, 2003 (the deadline for filing workers' compensation claims), 2,206 death claims were received by the New York State workers' compensation program. The number submitted amounted to 86 percent of the civilians killed in the attacks (emergency responders in New York City do not have workers' compensation coverage). Some claims may have been filed in other states, which would raise the percentage of civilians who filed claims. Additional claims were likely filed by the 215 civilians who were seriously injured, although estimates of the number that filed are not available. All but 61 of the New York death claims had been fully resolved by February 2004, almost all in favor of the plaintiff (Sullivan, 2004).

Projected Workers' Compensation Benefits. The expected lifetime payout on a New York workers' compensation death claim resulting from the attack on the World Trade Center is about \$400,000.⁴ To provide a rough estimate of overall workers' compensation payments, we increase the number of death claims from the 2,206 filed in New York to 2,500 to account for death claims in other states and claims by the seriously injured. When each claim is valued at \$400,000, the total projected workers' compensation benefits for the dead and seriously injured comes to \$1 billion.⁵

Tort

Congress significantly limited the tort options of those killed or seriously injured in the September 11 attacks. The Air Transportation Safety and Stabilization Act (ATSSA) (Public Law [PL] 107-42), passed into law just 11 days after the attacks, capped the liability of the airlines to their existing insurance coverage.⁶ The ATSSA granted exclusive jurisdiction to the U.S. District Court for the Southern District of New York for all cases related to the terrorist attacks of 9/11. The ATSSA also re-

⁴ The average lifetime cost per claim is based on calculations made by RMS, a firm that projects disaster losses for the insurance industry. RMS estimates that the average lifetime cost of a New York death claim in 2002 is \$462,000. The average for deaths from the September 11 attacks will likely be lower because RMS suspects that those killed in the attacks were on the whole younger and less likely to be married than the population on which the RMS calculation is based. The New York workers' compensation program pays \$50,000 to the estate of those killed on the job who do not have any dependents. RMS believes that \$400,000 is a more accurate estimate of the average lifetime payout for September 11 claims (Cohen, 2004).

⁵ The Insurance Information Institute estimated that workers' compensation benefits (including claims adjustment costs) would amount to \$1.8 billion (Hartwig, 2004a). This total includes payments to the injured as well as to the survivors of those killed.

⁶ An amendment to the Act, enacted in November 2001, added a number of other third parties to the list of those whose liability was capped to existing levels of insurance coverage. These additional third parties included the City of New York (capped at \$350 million), the Port Authority of New York and New Jersey, and the owners and operators of the airports from which the aircraft involved in the attacks departed.

quired that a person pursuing a claim through the Victim Compensation Fund, established by the same act, had to “waive the right to file a civil action (or be a party to an action) in any Federal or State court for damages sustained as a result of the terrorist-related aircraft crashes of September 11, 2001.” A November 2001 amendment to the act (PL 107-71) allowed suits pursuing collateral sources of assistance (such as life insurance) as well as suits against persons who knowingly engaged in acts of terrorism.

These limits on tort liability substantially increased the difficulty of recovering damages through the tort system for death and personal injury caused by the events of September 11. A possible exception may be the 40 passengers on United Airline Flight 93. The cap on liability for Flight 93 is \$1.5 billion, which, according to plaintiff attorneys interviewed for this study, would be adequate to cover the 40 eligible claimants. According to these attorneys, available insurance coverage for third-party claims from the other three planes that crashed on 9/11 would not be enough to meet the potential combined property/casualty, business interruption, and bodily injury claims. As a consequence, these attorneys believe that the tort system had little to offer the dead and injured, other than those on Flight 93, and that almost all families would apply to the VCF. As the discussion later in this chapter makes clear, those attorneys turned out to be correct.

Initially, a sizable number of surviving family members kept their tort options open. By July 2002, approximately 450 families had filed notices of intent to sue the Port Authority of New York and New Jersey for losses suffered on September 11 (Chen, 2002b).⁷ However, most of those families eventually elected not to sue.⁸ In January 2004, it was believed that between 80 and 100 wrongful death claims naming defendants other than terrorists would continue to make their way through the court system (Garc’a, 2004). In July 2004, Ken Feinberg, the special master of the September 11 Victim Compensation Fund, put the number at 70 (Chen, 2004).⁹ In September 2004, just in time to meet the three-year statute of limitations on claims related to 9/11, a lawsuit against Riggs Bank was filed on behalf of some of those killed in the attacks. The plaintiffs allege that the bank’s failure to comply with banking oversight laws resulted in funds being transferred from Saudi Embassy accounts to at least two of the 9/11 hijackers (Simpson, 2004).

Motorola and the City of New York were sued by the families of 12 emergency responders (all firefighters) who alleged that faulty handheld radios contributed to the deaths of their family members. The suits were dismissed in March 2004, because

⁷ The Port Authority owns the World Trade Center.

⁸ The closing date for filing an intent to sue was September 11, 2002, and the date by which a plaintiff had to elect to transition from an intent-to-sue to an actual lawsuit was January 22, 2004.

⁹ The Metropolitan Washington Airports Authority reported 43 pending wrongful death lawsuits continuing after the January 22, 2004, deadline (Garc’a, 2004; “Families of 9/11 Victims Sue Motorola,” 2004).

the firefighters had accepted awards from the Victim Compensation Fund (“New York Judge Dismisses 9/11 FDNY Radio Lawsuit,” 2004).

Cases were filed against the terrorist organizations believed to be responsible for the attacks and against various high-ranking officials in the Saudi government, including members of the royal family (Shenon, 2002; Kelley, 2002). There was no restriction on pursuing such cases in parallel with filing claims in the VCF. However, there is little confidence that such suits will ever amount to much. Experience from past events suggests that such court cases take years to reach any sort of resolution and seldom result in judgments that lead to payments to the families of the deceased or injured. The 1988 bombing of Pan Am Flight 103 over Lockerbie, Scotland, is an exception, at least in part. The 270 plaintiffs did ultimately receive \$10 million each, but it took 15 years to reach a settlement (Glaberson, 2003).

Projected Benefits Provided Through the Tort System. Recovery for the approximately 70 wrongful death plaintiffs is uncertain. To recover from the airlines, the plaintiffs will have to convince a jury that the airlines and other defendants acted negligently, hardly a forgone conclusion when the losses were due to the intentional acts of terrorism. In predicting insured losses due to the September 11 attacks, insurance industry analysts are still predicting \$3.5 billion for losses under liability policies carried by American Airlines and United Airlines and \$4 billion for losses under policies carried by other insureds (Hartwig, 2004a, p. 6).¹⁰ These predictions include potential suits by plaintiffs other than the dead and seriously injured and appear to be more of a cautious upper bound on liability losses rather than based on detailed analysis of claims and expected potential payoffs.

We do not believe there is adequate information to make estimates of benefits that the dead and seriously injured might receive through the tort system. We, thus, do not include such potential payments in our summary of benefits to the dead and seriously injured.¹¹

Government Programs

The September 11th Victim Compensation Fund. The September 11th Victim Compensation Fund of 2001 is an unprecedented program established to compensate those killed or physically injured by the September 11 attacks. The VCF was established as a part of the ATSSA. The program was the result of a political compromise that balanced aid to victims with billions in aid to the airlines and set up a quid

¹⁰ Payments under liability policies include both payments to the third party seeking to recover losses and the legal and other defense costs of the insured.

¹¹ Average payments in wrongful death cases for commercial aviation accidents range between \$2 million and \$4 million (Swierenga, 2001). At \$3 million per award, awards to the 70 civilian estates would total \$210 million. As will be seen below, \$210 million is not large relative to the overall amount of benefits received by individuals and businesses affected by the attacks. Punitive damages could add substantially to the total, however.

pro quo for the liability restrictions. It was also an expression of sympathy to the victims. It was hoped that the VCF would provide speedy and generous compensation to the families of the deceased and physically injured, and with low legal fees and other transactions costs, in place of tort remedies that had been severely limited.

Eligibility for the VCF was limited to those who were killed or physically injured at the WTC site, the Pentagon, and the victims on United Airlines Flight 93 that crashed in Pennsylvania. To be eligible for the program, civilians must have been at the site within 12 hours of the attacks, suffered a physical injury, and been treated by a medical professional within 24 hours of the injury, within 24 hours of rescue, or within 72 hours of injury or rescue for those victims who were unable to realize immediately the extent of their injuries or for whom treatment by a medical professional was not available on September 11. Rescue workers were eligible for the program if they were at the site within 96 hours of the attacks, and the VCF special master had discretion to extend the limit for seeking medical care beyond 72 hours (September 11th Victim Compensation Fund of 2001, 2002). Immigration status was not considered when determining eligibility. Emotional injuries were not eligible for compensation from the VCF.

Fund awards for the deceased were based on the following three main components, which we discuss next:

Fund awards = award for economic loss + award for noneconomic loss – collateral sources offsets.

*Awards for Economic Loss.*¹² The VCF's process for determining economic loss began by calculating *presumed economic loss* as follows:

1. Establish the victim's age and recent income.
2. Determine after-tax income by applying effective combined federal, state, and local income tax rate for victim's tax bracket.
3. Add value of employer-provided benefits.
4. Estimate the victims' expected remaining years of workforce participation.
5. Project income and benefits using an expected growth rate for earnings.
6. Adjust the amount of earnings to account for the risk of unemployment.
7. Subtract the victim's share of household expenditures.
8. Calculate the present value of projected income and benefits (U.S. Department of Justice, 2002a).

¹² The legislation setting up the VCF defines *economic loss* as "any pecuniary loss resulting from harm (including the loss of earnings or other benefits related to employment, medical expense loss, replacement services loss, loss due to death, burial costs, and loss of business or employment opportunities) to the extent recovery for such loss is allowed under applicable State law" (Air Transportation Safety and Stabilization Act, Section 402).

In calculating presumed economic loss, annual incomes up to \$231,000 were considered (which correspond to the 98th percentile of all wage earners in the United States). Individuals with higher incomes could accept awards based on the 98th percentile or seek an award for economic loss based on more detailed information supplied by the claimant. If the claimant chose the latter option, the VCF special master would determine an award for economic loss based on the individual circumstances of the claimant including the financial needs of the victim and/or surviving family members (U.S. Department of Justice, 2002a, p. 11237). How individual circumstances and financial needs would be evaluated was not explicitly stated in the VCF regulations.

Whether or not the Air Transportation Safety and Stabilization Act required the VCF to base awards on full lifetime earnings for the highest income earners was a hotly debated issue. Congress directed the VCF special master to determine “the extent of the harm to the claimant, including any economic and noneconomic losses” and “the amount of compensation to which the claimant is entitled based on the harm to the claimant, the facts of the case, and the individual circumstances of the claimant” (Air Transportation Safety and Stabilization Act, Section 405 (b)). Some observers argued that this language required the special master to base awards on full lifetime earnings. Others argued that even though the Act required the special master to calculate economic and noneconomic losses, it did not require the special master to pay them. Rather, the award could be based on the individual circumstances of the claimant. The VCF regulations argued that individual circumstances included individual needs and providing compensation beyond the 98th percentile income “would rarely be necessary to insure that financial needs were met” (see U.S. Department of Justice, 2002a, p. 11237).

Several other aspects of the method used to calculate presumed economic loss were controversial. The value of household services that would have been performed by the victim was included only if the victim did not have any prior earned income or had worked part-time outside the home. Economic analyses have found that the value of these services can amount to several hundred thousand dollars (Charles River Associates, 2002b). There was also no explicit consideration given to the value of lost parental guidance. Awards in New York Courts for loss of parental guidance have frequently amounted to several hundred thousand dollars per child and have sometimes run from \$1 million to \$2 million per child (Leoussis, 2002).

The VCF based its estimates of expected growth rates for earnings on data from the United States as a whole. Growth rates based on data from the New York region are higher than those for the nation as a whole. Rates for the finance sector (in which at least a third of those killed had worked) are higher than those for other economic

sectors (Charles River Associates, 2002a).¹³ The result was that the VCF's growth rates for earnings likely underestimated the earning potential of some claimants (particularly higher-income claimants), although they may have overestimated the earnings potential of others.

The VCF made some assumptions that were favorable, on average, to claimants. For example, it based estimates of expected remaining years in the workforce for both men and women on data for men, which benefited women. Also, the tax rate was based on the income of the victim at the date of death (September 11), and it did not increase as projected increases in earnings moved the victim into higher tax brackets (U.S. Department of Justice, 2002b, pp. 2–4).

*Awards for Noneconomic Loss.*¹⁴ The VCF set awards for noneconomic loss for those killed in the 9/11 attacks according to a flat schedule, with all eligible claimants receiving \$250,000 per victim and an additional \$100,000 per spouse and dependent child. Noneconomic-loss awards for the seriously injured, on the other hand, depended on the circumstances of the case and were not subject to a cap.

Collateral Sources. The enabling legislation for the VCF stated that awards should be reduced by the value of *all* collateral source compensation available to a claimant as a result of the terrorist attacks. It stipulated that collateral sources included “life insurance, pension funds, death benefit programs, and payments by Federal, State, or local governments related to the terrorist-related aircraft crashes of September 11, 2001” (Air Transportation Safety and Stabilization Act, 2001). The VCF special master clarified this language and explicitly excluded any charitable awards received by claimants (meaning receipt of such awards did not reduce award amounts).¹⁵ In addition, the Final Rule for the VCF stated that 401K accounts would not be considered collateral sources. Finally, the special master determined that contingent government benefits, such as Social Security payments that terminate should the beneficiary remarry, would not be counted as collateral sources. However, he left in place the remaining collateral source deductions stipulated in the original legislation. In particular, life insurance payments were deducted from the calculated award.

¹³ To illustrate the potential difference, the VCF set the growth rate for earnings at 5.6 percent for a victim aged 39. By comparison, Charles River Associates calculated a 13.1 percent growth rate for a 39-year-old in the New York financial sector (Charles River Associates, 2002a).

¹⁴ The legislation setting up the VCF defines *noneconomic loss* as “losses for physical and emotional pain, suffering, inconvenience, physical impairment, mental anguish, disfigurement, loss of enjoyment of life, loss of society and companionship, loss of consortium (other than loss of domestic service), hedonic damages, injury to reputation, and all other non-pecuniary losses of any kind or nature” (Air Transportation Safety and Stabilization Act, Section 402).

¹⁵ One congressional staffer we interviewed believed that Congress intended to deduct charitable gifts from VCF awards, and Special Master Ken Feinberg initially proposed to consider charitable payments as collateral sources. However, Mr. Feinberg reversed his position when charities threatened to withhold distributions until after the VCF awards were made (Katz, 2003, p. 579).

The benefits paid by the VCF were patterned to some extent after the tort system. As in the tort system, projected earnings were the starting point for awards, at least for those with incomes up to the 98th percentile of incomes of all wage earners. The benefits paid by the Victim Compensation Fund, however, differ from those paid by the tort system in important ways. Unlike the VCF, the tort system

- considers all earnings of the highest income earners
- pays noneconomic loss for pain and suffering according to the individual circumstances of the plaintiff, without a limit
- does not typically deduct life insurance and many other collateral sources from the award¹⁶
- allows punitive damages.

There were a number of legal cases involving the Victim Compensation Fund itself. Families of seven employees of Cantor Fitzgerald, a securities firm that lost 658 of its 1,000 employees in the attack on the WTC, and two other families filed suits alleging that the special master had violated the legislative intent of the statute that established the VCF. Most of the Cantor complaint centered around what the plaintiffs viewed as an improper cap on payments to high-wage earners and unfair and discriminatory treatment for young, single employees. The families of the seven Cantor employees filed together in January 2002 and sought class-action treatment at that time. Judge Alvin Hellerstein of the U.S. District Court for the Southern District of New York heard all these cases on an extremely expedited schedule, and on May 8, 2002, dismissed them (Chen, 2003).¹⁷ The Cantor families appealed. Their cases were consolidated and were heard as *Schneider v. Feinberg* by the U.S. Court of Appeals, Second Circuit (345 F. 3d 135). A decision was released on September 26, 2003. The appeal affirmed in part and dismissed in part the trial court decision. The specifics of the decision lead us to expect that it will have little if any impact on the actual award decisions made by the VCF special master.

Enrollment in the VCF proceeded slowly. Only 1,177 death claims were submitted through August 2003, representing just under 40 percent of those who were eligible to submit a claim. A flood of claims was submitted between August and December, however. In the end, 2,879 death claims were paid (representing 97 percent

¹⁶ Collateral sources are not deducted in the majority of states. A minority of states requires some collateral sources to be deducted from awards, but none require that life insurance be deducted (Abraham and Logue, 2003, p. 601).

¹⁷ Judge Hellerstein said there was “no reliable evidence that the special master has imposed a cap” and that there was “no basis to believe that \$6 million will be the maximum award if the facts and circumstances merit a higher award” (Chen, 2003).

of the 2,976 civilians and emergency responders killed in the attacks).¹⁸ Thus, only 97 eligible families did not receive benefits from the VCF. As discussed in the subsection on tort above, approximately 70 families pursued wrongful death claims. The remaining 30 or so neither pursued wrongful death claims nor were compensated by the fund. The special master was required to make a final determination on a claim within 120 days of its filing and to make a payment available within 20 days of the final determination.

Projected Benefits Paid by the VCF. Awards to the estates of those killed in the attacks after collateral offsets ranged from \$250,000 to \$7.1 million, with a mean of \$2.08 million and a median of \$1.68 million (U.S. Department of Justice, 2004d). A breakdown of the total number receiving awards from the VCF into numbers of civilians and emergency responders was not reported, but if it is assumed that the split reflects the breakdown of the total number killed (see Table 3.1), then total VCF payments to *civilians* killed in the attacks would be approximately \$5.13 billion.¹⁹

Detailed figures were not available on average VCF payments for the estimated 250 people hospitalized in the immediate aftermath of the attacks, but some awards were very large. Awards for personal injury claims ranged from \$500 to \$8.6 million, and payments for the 2,677 personal injury awards made by the VCF were expected to total \$900 million.^{20, 21} As discussed above, noneconomic damages for personal injuries were determined on a case-by-case basis with no cap. Absent better information, we assume that the average payments to the 250 who were seriously injured in the attacks equaled the average payments to those who were killed or injured. We assume that 86 percent (the proportion of the civilians killed in the 9/11 attacks, including the attack on the Pentagon and the Pennsylvania plane crash) of the resulting \$520 million went to civilians. After payments to the seriously injured are added to payments that went to the deceased, payments to civilians killed or seriously injured in the attacks rise to \$5.58 billion. Fees and expenses charged by attorneys representing VCF claimants would have to be paid out of these totals, reducing the

¹⁸ The number of death claims paid is calculated by subtracting the number of personal injury claims paid from the number of total claims paid as reported on the Victim Compensation Fund Web site (U.S. Department of Justice, 2004a, 2004b).

¹⁹ Of those killed, 85.7 percent were civilians, which implies that 2,468 civilians received compensation from the VCF after this percentage is applied to the 2,879 death claims paid by the VCF. Multiplying the average award by 2,468 results in total VCF payments of \$5.13 billion. This total does not include administrative costs.

²⁰ Awards for death and personal injury claims combined are expected to total \$6.9 billion (Chen, 2004). A \$2.08 million average payment on 2,879 death claims amounts to almost \$6 billion for death claims, leaving \$900 million for personal injury claims. The number of personal injury claims paid is from U.S. Department of Justice (2004b).

²¹ In its October 2003 audit, the Department of Justice's Inspector General's office assumed that there would be four high-value physical injury claims averaging \$6.8 million per claim. The largest personal injury award at the time of the study was \$6.8 million (U.S. Department of Justice, 2003e, p. 10).

amount finally received by claimants. Attorney fees for those filing claims with the VCF are discussed later in this chapter.

Tax Breaks. The Victims of Terrorism Tax Relief Act of 2001 (PL 107-134) provided substantial tax breaks to those killed or seriously injured in the attacks. Two years of federal income taxes were rebated to all families of victims in this category, with eligibility determined by the same language used in the legislation establishing the Victim Compensation Fund. The rebate period was the year before the attacks and the year of the attacks. In addition, the first \$8.5 million of the victim's estate was shielded from estate taxes (\$600,000 was the standard deduction for estates in 2001). Finally, the law included provisions that made virtually all assistance related to the 9/11 attacks (including charitable donations, payments from the Victim Compensation Fund, and workers' compensation payments) nontaxable. We have not been able to quantify the value of these tax benefits.

Social Security. Social Security pays benefits in the event of disability or death. It pays a small lump-sum death benefit of \$255 and monthly payments to a surviving spouse. The average benefit for a widow or widower caring for two eligible children was approximately \$21,000 a year in 2002. Benefits end when the children reach 18, or 19 if they are still in high school, or when the surviving spouse remarries.

As of March 2002, 2,300 children of the 9/11 victims were receiving Social Security, as were 700 widowed spouses caring for those children. In 2002, the Social Security program was paying out about \$2.8 million per month to families of those killed in the attacks (National Academy of Social Insurance, 2002a).

Projected Social Security Benefits. To approximate the total Social Security payments made to the families of those killed in the 9/11 attacks, we alternatively assumed that the \$2.8 million in monthly payments is maintained for ten and 15 years. After the lump-sum payments are included, estimated total payouts range from \$340 million to \$500 million. This total includes payments to emergency responders; following the proportion killed who were civilians, we allocated 86 percent of the total to civilians. The midpoint of the resulting range is \$360 million.

Had the September 11 attacks not occurred, many of those who received Social Security death benefits would undoubtedly have received Social Security benefits later in life. Our estimate thus does not predict the increase in Social Security payments due the attacks; rather, it measures the amount of Social Security benefits triggered by the attacks.

State Crime-Victim Compensation Programs. State crime-victim programs provide benefits to those who are killed or physically injured by criminal acts. Benefits from these programs were made available to those who were killed or seriously injured by the September 11 attacks. The New York State Crime Victims Board, for example, paid medical expenses, with no maximum, to New Yorkers who suffered an injury as a direct result of 9/11. Reasonable burial expenses were covered without a stipulated maximum. Essential personal property lost or destroyed as a result of the

attacks was covered up to \$500. Families of those killed or unable to work were also eligible for loss of earnings up to a lifetime maximum of \$30,000. Rehabilitative occupational training was made available to victims and their families. The New York crime-victim program is the payer of last resort. Benefits from other sources (such as workers' compensation, Social Security, and personal insurance policies) were subtracted before the Crime Victims Board payments were made (New York State Crime Victims Board, 2003).²² Payments from state crime-victim programs were deducted from VCF awards.

New York's crime-victim compensation program began making emergency payments to victims and surviving family members within days after 9/11, and the payments to victims of the attacks made up a substantial share of the program's budget over the following year. In the year after 9/11, payments to 9/11 victims exceeded payments to all other crime victims in New York, and program expenditures were more than double the usual levels (Eddy, 2003, p. 16).

Projected Benefits from Crime-Victim Programs. The Office of Victims of Crime in the U.S. Department of Justice distributed approximately \$23 million overall to state programs to provide compensation and assistance, other than mental health counseling, for the victims of the 9/11 attacks. New York State received about 60 percent of the total (U.S. Department of Justice, 2003d, pp. 13–14). Grants to meet mental health needs were also provided, but the programs were not restricted to the dead and seriously injured. They are discussed in the examination of mental health benefits in Chapter Four.

FEMA. The Federal Emergency Management Agency had several programs that were made available to the families of the dead and seriously injured. Households whose income fell 25 percent because of a death or injury and who received a late notice for a rent or mortgage payment were eligible for benefits to cover up to 18 months of rent or mortgage payments. FEMA also provided disaster food stamps in the weeks immediately after 9/11 to lower-income families of the dead and seriously injured. Finally, FEMA funded Project Liberty, a program that provided free crisis counseling, education, and referral services to individuals, families, and groups directly affected by the September 11 attacks. The utilization rates of these programs by the families of those killed or seriously are not known. All three programs were used by other victim groups and are discussed later in the report.

²² For example, if someone was eligible for \$600 per week in wage replacement from the Crime Victims Board, but was already receiving \$200 from workers' compensation, only \$400 would have been paid by the Crime Victims Board.

Charity

Charities distributed substantial sums to those killed or seriously injured in the September 11 attacks, and as discussed above, these awards were not deducted from payments made by the VCF.

The American Red Cross set up several different programs for those who were killed or seriously injured:

- The Family Gift Program distributed \$66,410 on average to 3,147 families to cover 12 months of living expenses (\$209 million total).
- The Supplemental Gift program gave a flat \$55,000 to each of the 2,703 estates of those killed in the attacks and to 128 individuals who suffered serious physical injuries (\$156 million total).²³
- The Special Circumstances Gift program was created primarily for extended and nontraditional survivors of the deceased who could not benefit from the previous two programs because they were not beneficiaries of the estate. Gifts ranged from \$600 to \$140,000, and an average of \$22,391 was paid to 460 households (\$10.3 million total).
- The International Family Assistance Program provided nearly \$11 million in assistance and support services to foreigners seriously injured in the attacks, to the families of foreigners killed in the attacks, and to foreigners whose homes were impacted by the attacks and who then relocated or returned home.
- The Anniversary Travel Assistance Program covered \$4.3 million in travel expenses to allow family members of the deceased, missing, or injured to travel to the September 11, 2002 Memorial Services (Lowry, 2004a).

The American Red Cross also set up a program (the Health Insurance Subsidy Program) to provide ongoing subsidies for health insurance for the seriously physically injured and family members of those who were killed or seriously injured. The program covered the full out-of-pocket cost of health insurance premiums for 24 months.²⁴ The Red Cross budgeted \$9.6 million for the 218 households enrolled in the program and for 90 households whose applications were pending as of August 2004 (Lowry, 2004b).

The Red Cross had previously never made such large gifts to individuals (Seessel, 2003, p. 15). Red Cross payments to the dead and seriously injured totaled \$431 million. The September 11th Fund gave each of 3,500 families \$20,000, for a total

²³ The Red Cross defined a serious physical injury as one that resulted in a continuous 90-day period of physical disability.

²⁴ A program description is available at <http://www.workingtoday.com/about/redcross.php>.

of \$70 million.^{25, 26} Charities are typically required to distribute aid based on financial need to maintain their tax-exempt status (Katz, 2003, pp. 552–557). However, Congress suspended this requirement for those killed in the September 11 attack and the anthrax attacks that followed. Charities were allowed to give aid on a per-capita basis rather than based on need (U.S. General Accounting Office [GAO], 2002b, p. 13).

Beyond the major charities, a number of other smaller organizations provided assistance to the families of the deceased and seriously injured. For example, the New York World Trade Center Relief Fund, run by the State of New York, provided \$10,000 to surviving spouses and domestic partners, as well as \$5,000 to children under the age of 21. The fund also paid \$10,000 to parents of victims for whom there was no surviving spouse, domestic partner, or child (Lower Manhattan Development Corporation [LMDC], 2002a, p. 5).

Businesses that lost employees in the attacks also set up charitable funds. Three firms whose employees together accounted for about one-third of the deaths at the World Trade Center (Cantor Fitzgerald, March & McClellan, and Keefe, Bruyette & Woods) raised about \$30 million for the families of employees who died in the attack on the WTC (Seessel, 2003, p. 15). Some companies also continued to provide health benefits for survivors. Cantor Fitzgerald, for example, intended to pay the full cost of surviving families' health insurance for ten years (Lowry, 2004a).

In the process of conducting the interviews for this study, we uncovered a puzzling discrepancy. A survey completed by McKinsey & Company (2002) found that 98 percent of the families of the deceased (excluding emergency responders) had received cash assistance from charities—\$90,000 on average through May 2002 (McKinsey & Company, 2002, p. 14). Data kept by the Red Cross and The September 11th Fund show that virtually all the families of the dead and seriously injured received money from The September 11th Fund. But, according to the employers of and attorneys representing some of the highest-income injured and deceased individuals, their employees and clients had received little if any financial support from any of the charities. Several people we interviewed expressed their dismay and disappointment that the individuals they represented had not received charitable monies in any significant amounts. It could be that from the perspective of the survivors of the high-income earners who were killed or seriously injured in the

²⁵ The September 11th Fund is not to be confused with the congressionally created September 11th Victim Compensation Fund discussed above. The September 11th Fund is a private, charitable enterprise created by the New York Community Trust and the United Way of New York City.

²⁶ Safe Horizon, a nonprofit organization that administers the state crime-victim program in New York City, was a major conduit for charity funds. In days immediately after the attacks, The September 11th Fund advanced money to Safe Horizon so that Safe Horizon could pay out \$1,500 every two weeks to families of the deceased and seriously injured. A December 2001 gift of \$10,000 per family of the deceased and seriously injured was funded by The September 11th Fund and distributed by Safe Horizon.

attacks, the charitable contributions were small relative to the post-9/11 reductions in income. In an effort to distribute aid, the Red Cross worked with the human resources departments of some of the businesses that lost employees. Therefore, it could be that recipients did not know that the benefits they received through their firms were funded by charities. A few high-income earners may not have applied for charitable gifts because they thought it would be too time consuming or too embarrassing, or because they felt it was inappropriate for them to receive charity.

On top of the benefits discussed so far, a large number of private corporations, foundations, and charities offered scholarships to dependent children, spouses, and domestic partners of the deceased and seriously injured. Most of the scholarship-granting organizations linked themselves together through a collective called the September 11 Scholarship Alliance. Most of the funds were to be used to pay for education at accredited two- or four-year colleges, universities, or centers for vocational education. Some scholarships, although significantly fewer in number than others, were available to the same population to pursue graduate education. The Families of Freedom Scholarship Fund is one of the major post-9/11 scholarship funds. Co-chaired by former President Bill Clinton and Senator Bob Dole and administered by the Citizens' Scholarship Foundation of America, it raised \$113 million through September 2002 (Fessenden, 2002). Awards from the fund ranged from \$1,000 for students with little or no financial need to \$28,000 per academic year for those with greater need. The average award through January 2004 was \$13,100 per academic year (Citizens' Scholarship Foundation of America, 2002).

Projected Charity Benefits. The Foundation Center, a leading authority on U.S. philanthropy, reported in December 2003 that charities distributed \$739 million to individuals, excluding uniformed service workers, who were killed or injured (whether seriously or not) in the 9/11 attacks and their families. This total excludes funds for scholarships (Renz, Cuccaro, and Marino, 2003, pp. 21–22). Payments averaged nearly \$270,000, when spread across the 2,551 civilians who were killed and the 215 who were seriously injured in the attacks, but some of these benefits went to victims who were not killed or *seriously* injured. Examples include those who suffered emotional injuries but who were not killed or seriously injured and those who suffered respiratory injuries not requiring hospitalization in the immediate aftermath of the attacks. Data on the share of the \$739 million that went to the dead and seriously injured are not readily available. The cash payments through the charitable programs described above average at least \$150,000 per family, and this average does not include the value of services, payments by other charities, and payments by the New York World Trade Center Relief Fund to children under 21. Therefore, it is likely that families of civilians killed or seriously injured received at least \$175,000 in charitable payments on average and could well have received up to \$225,000. To project total charitable payments to the 2,766 killed or seriously injured, we assume

that payments averaged \$200,000 to each victim. The resulting total is approximately \$550 million.

The Foundation Center also reported that charities raised \$182 million overall to provide scholarships and tuition aid for victims' dependents for the years 2000 to 2020. This averages to \$61,000 in aid per deceased (both civilian and emergency responders). Using the same percentage of civilian fatalities (86 percent) as in our prior estimates, we estimate that 86 percent of these funds, or approximately \$160 million, will go to civilians.

Summary of Benefits for Civilians Who Were Killed or Seriously Injured

Table 3.2 provides an overview of the amounts received by those who were killed or seriously injured in all the terrorist-related events of 9/11 or their families. On the whole, victims received substantial amounts through life insurance and workers' compensation programs. The value of government benefits approached \$6 billion before tax benefits are added in. Charity distributions to the dead and seriously injured were very large, but, even so, amounted to no more than 10 percent of the total. Insufficient information is available to estimate tort payments, but it seems likely that, in the end, they will account for a small share of overall benefits.²⁷ Total benefits that we were able to quantify to civilians killed or seriously injured in the 9/11 attacks amount to \$8.7 billion, or an average of \$3.1 million per recipient.

Assessment of Benefits to Civilians Who Were Killed or Seriously Injured

Civilians killed or seriously injured in the September 11 attacks received substantial compensation. Life insurance, charitable contributions, workers' compensation, and other government programs provided the dead and seriously injured with support in the months immediately after 9/11 and allowed claimants to carefully consider whether or not to file a claim with the VCF program.

Equity Issues. Corrective justice requires that benefits for those killed or seriously injured match economic and noneconomic losses. In this subsection, we first examine the extent to which benefits covered economic loss and then discuss the relationship between benefits and noneconomic losses. We then evaluate the awards on the basis of distributive justice.

For those killed in the 9/11 attacks, we evaluate economic loss in terms of the probable contributions the deceased would have made to his or her survivors should the deceased have lived (so-called economic loss to survivors).²⁸ To examine how

²⁷ A substantial share of any tort payments that are eventually made would likely be paid for by insurers.

²⁸ For further discussion of economic loss to survivors, see King and Smith, 1988, p. vii. An alternative concept used in some state-courts measures the decedent's before-tax earnings and nonmarket services. This concept measures the economic contribution of the deceased to society (King and Smith, 1988, p. vi).

Table 3.2
Benefits Provided Through the Four Compensation Mechanisms to Civilians Who Died or Were Seriously Injured in the 9/11 Attacks

Compensation Mechanism	Amount ^a (\$millions)	Payments Deducted from VCF Award?
Insurance		
Life insurance	1,000	Yes
Workers' compensation	1,000	Noncontingent portion deducted
Total quantified insurance benefits	2,000	
Tort	Unknown	Ineligible for VCF if tort awards are received
Government programs		
Victim Compensation Fund	5,580	—
Federal tax benefits	Unknown	No
Social Security	360	Noncontingent portion deducted
Office of Victims of Crime	20	Yes
FEMA	Unknown, but likely relatively small	Yes
Total quantified government benefits	5,960	
Charity		
Cash and services	550	No
Scholarships	160	No
Total quantified charitable benefits	710	
Total quantified benefits, all mechanisms	8,670	

^a Dollar amounts are rounded to nearest \$10 million.

total benefits related to this concept of economic loss, it is useful to examine the financial situation of survivors with and without the attacks (see Table 3.3). Our simplified example does not include all sources of income (e.g., crime-victim programs) but is adequate to highlight the issues that are most important for comparing benefits to economic loss.

To balance both sides of the ledger and make survivors equally well-off financially with or without the attacks, VCF awards should equal the following:

- Fund awards = future after-tax earnings
- + value of future benefits (e.g., health insurance, contributions to 401K accounts, and pensions plans excluding any life insurance component)
- + value of future household services
- + value of future parental guidance
- + uncovered physical and mental health care costs
- employer-provided life insurance payments
- other life insurance payments
- charity donations

- value of 9/11 tax benefits
- Social Security death benefits + Social Security retirement benefits
- victim’s share of future household consumption
- Social Security employee contribution
- life insurance premiums.

Certain features of the VCF awards tend to cause overall compensation received by survivors of those killed in the attacks to exceed economic loss. The VCF did not deduct charity donations, the value of 9/11 tax benefits, life insurance premiums, or employee Social Security contributions from awards. On the other hand, a number of features of the VCF awards tend to cause overall compensation to be less than economic loss. The value of household services was paid only for those who worked part-time or not at all outside the home, and no payments were made for lost parental guidance. As discussed above, the value of these services can easily amount to several hundred thousand dollars. The VCF also did not cover the costs of the mental health care needed by the survivors that were not paid for by other sources. The VCF’s decision to deduct that part of the pensions that had accrued by the time of the attacks would also tend to cause overall compensation to be less than economic

Table 3.3
Financial Situation of 9/11 Survivors, with and Without the Attacks

Decedent Contribution to Survivor Without the Attacks	Received by Survivor with the Attacks
Future after-tax earnings	VCF awards
Value of future benefits (e.g., health insurance, contributions to 401K accounts, and pensions plans excluding any life insurance component)	Savings and investments in 401K accounts at the time of attacks
Savings and investments in 401K accounts at time of attacks	Pension benefits accrued at time of attacks
Pension benefits accrued at time of attacks	Employer-provided life insurance payments
Value of future household services	Other life insurance payments
Value of future parental guidance	Charity donations (including those provided by employers)
Social security retirement benefits	Value of 9/11 tax benefits
Less	Social security death benefits
Victim’s share of future household consumption	Less
Social security employee contribution	Uncovered physical and mental health care costs
Life insurance premiums	

loss. The decision to deduct all Social Security death benefits, not just the difference between Social Security death and retirement benefits, would also tend to result in overall compensation being less than the loss.²⁹

Sufficient data are not available to determine the net effect of these factors. What is more, a comparison of overall compensation to economic loss requires assessment of the assumptions used by the VCF to project salaries and benefits for those killed in the attacks. As discussed above, some of these assumptions were unfavorable to some claimants and others were favorable. There is good reason to suspect that the highest-income earners did not receive full compensation for their economic loss. The VCF used income only up to \$231,000 to calculate presumed economic loss,³⁰ and the program rules stated that compensation based on income above that level would rarely be necessary to meet financial needs. However, the VCF special master had a large amount of discretion to set awards for high-income earners. Unfortunately, data are not available on how he exercised that discretion.³¹ Thus, even for high-income earners, the relationship between benefits and economic loss cannot as yet be determined. Individual data from the Fund on projected lifetime earnings, collateral offsets, and awards are needed before a better sense of how the benefits received by high-income earners compared with their economic losses. Similar arguments hold for those who were seriously injured.

Some of those representing the interests of those killed or seriously injured in the attacks believe that the noneconomic damages offered by the VCF were inadequate. For example, a brief from the firm Cantor Fitzgerald that was submitted to the VCF special master stated, “The presumed awards for noneconomic loss—\$250,000 per decedent plus \$100,000 for the decedent’s spouse and each dependent—are woefully inadequate and obviously fall far short of what a claimant could expect to be awarded in court” (Cantor Fitzgerald, 2002, p. 58). Juries in recent aviation accident cases have awarded far higher amounts for noneconomic damages.³² In the Institute

²⁹ The VCF special master did favorably interpret many offsets from the point of view of claimants, however. For example, only the noncontingent components of Social Security death benefits were deducted.

³⁰ Roughly 18 percent of decedents had incomes above \$231,000. The Fund reports awards by income category, and 518 awards were made to estates of victims who earned more than \$220,000 a year. As reported above, 2,879 death claims were paid.

³¹ The details of individual claims have not been made public, and the Fund’s presumed economic loss calculations are not provided to claimants (Diller, 2003, pp. 725, 760).

³² The vast majority of state jurisdictions allow recovery for noneconomic damages such as loss of companionship, society, or consortium sustained by the survivors due to the death of the decedent (Stein, 1997, Section 3, Subsection 23). Several state jurisdictions technically only allow pecuniary losses in wrongful death cases, but nevertheless allow recovery for what amount to noneconomic damages. In California, “courts have uniformly allowed wrongful death recovery for loss of society, comfort, care, and protection afforded by the decedent despite the courts’ insistence that only ‘pecuniary’ losses are compensable” (*Krouse v. Graham*, 19 Cal. 3d, 1977, at p. 68). New York more strictly limits damages to pecuniary losses (Leoussis, 2002; Stein, 1997, Section 3, Subsection 23), but New York allows recovery for the pain and suffering of the decedent (*Gonzalez v. New York Housing Authority*, 77 N.Y. 2d 663, 1991).

for Civil Justice's jury verdict database, there are 12 verdicts for the plaintiff in aviation wrongful death cases between 1994 and 1999. The database covers all state court verdicts in New York and California and verdicts in selected large cities across the United States. The mean and median awards were \$7.4 and \$5.6 million, respectively (adjusted to 1999 dollars). For the eight cases in which noneconomic damages were reported separately, mean economic damages were \$2.2 million and mean noneconomic damages were \$4.8 million.³³ When the largest noneconomic damage award is excluded, the mean noneconomic award falls to \$3.3 million. Such awards may not be an appropriate standard for reference because they may have been reduced by the trial judge, on appeal, or in subsequent settlements. Also, jury verdicts are almost certainly higher than the mean and median awards for all aviation accident cases, most of which settle before a lawsuit is filed or before trial begins.^{34, 35} Despite these caveats, the large gap between recent jury verdicts and the VCF awards does suggest that VCF awards for noneconomic damages were less than what the compensation for noneconomic losses would have been in a *successful* tort case.

Even if VCF awards did not cover full noneconomic loss, however, we cannot as yet determine how overall compensation for losses from the 9/11 attacks compared with combined economic and noneconomic loss because of uncertainties over how benefits relate to economic loss.

Another metric for evaluating the average \$3.1 million per person in benefits that we were able to quantify is the amount that would have been received through the tort system had liability not been restricted. It is difficult to conclude whether or not victims received as much as they would have received through the tort system. The standard for compensation in most jurisdictions is compensation for full economic and noneconomic loss (without regard to potential collateral sources of compensation), and the potential shortcomings of VCF awards discussed above mean that the combined compensation might have fallen below what victims might have received in a *successful* tort case.³⁶

³³ Five of these verdicts were in California and one was in New York State.

³⁴ According to a representative of an airline industry organization, wrongful death cases in U.S. aviation accidents typically settle for between \$2 million and \$4 million two to four years after the event (Swierenga, 2001).

³⁵ Only 9 percent of aviation death cases between 1970 and 1985 analyzed by Kakalik et al. resulted in lawsuits that were resolved after trial began. Average compensation for cases that went to trial was approximately \$599,000 in 1986 dollars, nearly double the average of \$340,000 for all cases that closed before trial began (1988, p. x, xii). When adjusted for inflation using the Consumer Price Index, the average compensation for cases that went to trial becomes \$1,006,000, and the average compensation for all cases closed before trial becomes \$570,000. These figures include total compensation paid by all defendants for economic and noneconomic losses before subtracting the legal fees and expenses of the plaintiff. The average compensation for cases that went to trial and resulted in a verdict may be higher than the average for cases that went to trial.

³⁶ Abraham and Logue (2003, p. 592) observed, "[A]lthough the benefits paid by the Fund exceed those available under existing non-tort compensation regimes, these benefits cannot compare to what one can obtain in a tort recovery, given the possibility of large noneconomic and punitive awards in some tort cases."

However, there are two important factors that would work to counter the shortcomings in VCF awards. First, liability is not contested in typical aviation cases, which keeps down transaction costs and the time to disposition (the transaction costs of the VCF are discussed later in this chapter). It is likely that the airlines whose planes crashed on 9/11 would have contested liability, at least for those killed on the ground. It also is likely that the airports, the Port Authority, and other potential defendants would have contested liability for all those killed or seriously injured on 9/11. Proving negligence would hardly be guaranteed, and even if liability were established, the defendants might not be able to pay the awards. No victims of the 1993 attack on the World Trade Center or the Oklahoma City bombing have won tort cases (Diller, 2003, p. 722). The uncertainty of recovery has led some legal scholars to conclude that “compared to a similarly situated tort victim, a Fund claimant will likely receive more compensation at less cost in less time and with greater certainty” (Katz, 2003, p. 580).

Second, even though full recovery for economic and noneconomic loss is common for compensation in the tort system, payments in tort cases do not necessarily cover even economic losses. An analysis of aviation wrongful death cases between 1979 and 1982 found that awards (including both economic and noneconomic damage components) covered 59 percent of economic loss (King and Smith, 1988, p. 72).³⁷ The study also found that high-income earners fared worse than lower-income earners: The percent of economic loss recovered dropped dramatically as the loss suffered by the victim increased.³⁸ Thus, high-wage earners may have fared more poorly than lower-wage earners under the VCF in terms of the percentage of economic loss compensated, and they also may have fared more poorly in the tort system. Whether the total compensation received by those killed or seriously injured in the attacks was higher or lower than it would have been through the tort system remains an open question.

In terms of distributive justice, the compensation provided to civilians who were killed or seriously injured in the attacks raises fairness issues both among those who were killed or seriously injured and across victim groups. Tailoring payments to expected lifetime earnings means that some families received more than others. Those who received less wondered why the lives of their loved ones were valued less than others who made more money. It also encouraged people to vigorously pursue higher awards because the amount of the award became a measure of the worth of

³⁷ King and Smith found that the recovery rate rose from 41 percent to 59 percent between 1970 and 1982, and the replacement rate may be higher for more recent cases. King and Smith also found that the average award for the subperiod between 1979 and 1982 was \$1.76 million in 2003 dollars. These replacement rates use the loss-to-survivor concept of economic loss, and attorney fees have not been deducted from the awards.

³⁸ Over the entire 1970–1982 study period, the recovery rate was 49 percent. It was 70 percent for losses between \$200,000 and \$299,000 and fell to 29 percent for losses of \$2 million or more (in 1986 dollars) (King and Smith, 1988 p. 68).

the deceased. However, as evidenced by complaints of the highest-income earners, a more equal distribution of payments would not necessarily have resulted in any less divisiveness among beneficiaries.

The families of those killed or seriously injured were rarely identified as being undercompensated by those we interviewed. As will be discussed further in subsequent chapters of this report, when asked which groups were undercompensated, most of those we interviewed who were not representing the dead or seriously injured mentioned other victim groups, not the dead or seriously injured.³⁹ Some interviewees noted that there was no precedent for the scale of response seen from the VCF. Previous victims of terrorism attacks in the United States received no comparable set of benefits. Benefits for military personnel killed in the line of duty are nowhere near as large.⁴⁰ Additionally, some interviewees noted that no other set of crime victims in the United States has ever received this level of assistance from federal, state, or local authorities.⁴¹ None of those we interviewed disputed the tragic losses inflicted on those families whose loved ones were in the World Trade Center or the Pentagon or on the airliners that crashed. However, as we discuss in subsequent chapters, some interviewees thought that a higher share of resources should have gone to other victim groups, such as workers and small businesses.

A few interviewees argued that the scale of the VCF altered the expectations of compensation by other groups affected by the attack on the World Trade Center. In particular, they argued that the expected size of the VCF awards raised the expectations of other victim groups about the size of assistance payments one could or should expect from charity or other government programs. As a result, we were told, the unprecedented programs set up for other victim groups suddenly looked paltry and inadequate.

The special needs of immigrants raised a final equity issue for benefits provided to civilians who were killed or seriously injured in the attacks. Immigrants, regardless of immigration status, were eligible for VCF and most charitable assistance. However, it was noted by a number of respondents that the whole process of pursuing compensation and assistance was cast in an entirely different light when the family members and victims were recent immigrants (legal or illegal). Even in normal times, these families frequently face language and cultural barriers in dealing with government agencies and charitable organizations. These language and cultural issues be-

³⁹ Several respondents explicitly stated that benefits for families of the dead or seriously injured were high relative to those in other groups.

⁴⁰ The Veterans Administration provides the spouse of a military officer killed in the line of duty with two children under age 18 a lump sum payment of \$250,000 and monthly payments totaling \$17,067 per year (Seessel, 2003, p. 16).

⁴¹ Families of those killed in violent crimes receive no more than \$30,000 in lost wages from government crime-victim programs. Tort claims are often not successful in such cases and charity payments are limited.

come even more problematic in a time of crisis. Many of the major charities and government organizations (including the VCF) were quick to make public statements that the immigration status of the family members of the dead and seriously injured would not be investigated when those family members applied for benefits. The VCF stated on its website that all victims and decedents were eligible for benefits, regardless of immigration status. Despite these efforts on the part of both charities and government agencies, staff members of organizations that represent and advocate for immigrants told us that the process of pursuing compensation and assistance for immigrants was extremely challenging. For example, in the weeks immediately after 9/11, police and military personnel heavily guarded the family assistance centers for victims in New York City. Immigrants (both legal and illegal) found the presence of these military and police personnel extremely threatening, to the point that it kept many immigrant victim family members away from the assistance center sites. It was even reported to us that the first visible table at one of the initial locations used for disaster response (Pier 94) was clearly marked “INS.” The fact that the Immigration and Naturalization Service was there to assist rather than deport immigrants was not clear to many individuals. In response to the concerns of immigrants, the Red Cross opened up a separate disaster response center across from Pier 94 that was staffed by Chinese and Spanish speakers. No police or guards with guns were at the entrance to this center.

Efficiency Issues. A high proportion of those we interviewed, regardless of which stakeholder group they were in, reported that the survivors of the dead or seriously injured faced an enormously complex and confusing array of benefit programs. The situation was confusing partly because most of the institutions responding were new to an event of the scale of the 9/11 attacks or were new to a response of that scope.⁴²

Complaints commonly heard from most quarters pointed to inadequate communication and coordination between the responding agencies and organizations, which led to confusion for victims regarding benefit application procedures and available benefits.⁴³ For example, information about benefit programs and the application procedures associated with them were difficult to locate. At least initially, there was a great deal of duplication in the myriad forms required by each group providing benefits. It was widely reported to us that this duplicative paperwork decreased as

⁴² In an evaluation of charitable response prepared for the Ford Foundation, Seessel (2002b, p. 10) found that “[p]hilanthropic planning was complicated by the proliferation of new charities created to address 9/11 relief and recovery, many of which had inexperienced leadership and vaguely defined plans.”

⁴³ Funeral benefits were one example of the confusion created by the uncertainty over which programs were providing certain benefits. Because the deaths in the September 11 attacks were due to a criminal act, funeral benefits were paid by state crime-victim programs (which were funded in part by the Department of Justice). FEMA provides death benefits in other settings, but for the 9/11 attacks, FEMA denied requests for funeral costs, and the families of the deceased had to pursue reimbursement from the state crime-victim program.

weeks and months passed after 9/11. In December 2001, 13 of the major charities formed the 9/11 United Services Group, at least in part out of a common desire to address problems with coordination and communication. Common intake forms were developed, and caseworkers were trained who could answer questions about multiple sources of assistance and provide referral services to other groups.

In the end, however, most of those we interviewed (including plaintiff attorneys, affected firms, advocacy groups, and family members) who had direct ties to the families of the deceased or seriously injured believed the communication system remained flawed and did not, on balance, work well for the dead or seriously injured. A year after the attacks, many victims still felt overwhelmed and confused by the various programs that were available to them.⁴⁴

Not all of the problems associated with implementing effective coordination and communication procedures should be blamed on the charities and government organizations attempting to provide compensation and assistance to 9/11 victims. Concerns about privacy and legal limitations on sharing data forced charities and government organizations to keep personal data collected from beneficiaries confidential. These factors contributed to the overall slowness in adopting common intake forms and using a common “victim” database. For example, IBM stepped in and developed a database to be used by the 9/11 United Services Group for coordinating benefits provided by the 13 participating charities. When McKinsey & Company completed an assessment of unmet needs for the 9/11 United Services Group, it would have made sense for McKinsey to rely on this database as a means for contacting victims and collecting the necessary data for its analyses. Because no provision had been made at the time of data collection for using the data for anything other than benefit coordination, it was not possible for McKinsey to use the IBM database. Instead, it had to return to each of the responding charities and use their individual data resources to reach the victim population.⁴⁵

There was strong support among those we interviewed for using the experience of September 11 to create permanent channels of communication among the major government agencies, charities, and NGOs responsible for disaster response, assistance, and compensation. Many interviewees spoke about the desirability of creating an intake form to be used by government agencies, private charities, and NGOs nationwide. Representatives of many of the stakeholder groups recognized the benefit of building central data repositories for victim groups and the agencies and charities

⁴⁴ It should also be noted that many of the deceased were well-above-average wage earners and their families had no experience with receiving charity or had any expectation that they would ever need help from charitable organizations. Many of these families had to cross a significant psychological hurdle to admit that they needed charitable assistance of any kind. Some of these psychological issues may have contributed to victims having ongoing problems accessing available charitable organizations for financial and other forms of assistance.

⁴⁵ In fact, when they went back to the 13 charities it was decided that the charities themselves would mail out the survey forms, rather than turning over names and addresses to McKinsey.

attempting to meet those groups' needs. Such databases could allow for better intra-agency coordination, prevent fraud, enhance benefit distribution, and allow for improved research and analysis both during and after an event. Interviewees also suggested that more-accessible databases might serve as an important resource to victim-support groups, enabling them to organize and reach relevant victim-group subcategories. In 2002, the 9/11 United Services Group, Safe Horizon, and the Red Cross stated their intention to create ongoing links among the three agencies, but the initiative stalled for lack of funding.

The lack of coordination undoubtedly skewed the distribution of benefits across both those who were killed or seriously injured and between the dead or seriously injured and other victim groups. Charities were unable to determine what benefits applicants may have received from other charities and, thus, did not know if they were possibly providing duplicate benefits. Charities may have also allocated their funds differently if they had known in advance about the VCF. The VCF was passed into law on September 22, 2001, but during the 11 days between September 11 and September 22, the charities conducted fund-raising drives that many donors and stakeholders believed obligated the charities to distribute the contributions to the families of those killed or seriously injured. The lack of coordination between the government and the charities may have meant that a higher proportion of charitable resources went to those who were killed or seriously injured than the charities would have preferred. This lack of coordination probably fueled some of the perceived distributional equities discussed above.

Even though nearly everyone we interviewed thought that more coordination among charities, and between charities and the government, would be desirable, the associated costs should be considered before implementing proposals to increase coordination. Greater coordination may increase administrative costs and constrain the resourcefulness and creativity of some charities.

At the time of this study, data were not available to fully evaluate the transactional efficiency of the VCF. Information has not been collected on the administrative costs of the VCF or on the costs of claimants' legal representation. Even though the VCF special master donated his time, and most attorneys charged reduced rates or represented 9/11 clients free of charge, the value of the time these professionals spent must be included in the transaction cost calculation, regardless of the price charged for their services.⁴⁶ The average time to award was not yet available as of this writing; however, because the VCF was required to resolve all claims by June 2004, the average time to award should be less than 2.75 years.

⁴⁶ Trial Lawyers Care, a program set up by the Association of Trial Lawyers of America, provided pro bono legal representation to victims that applied to the Fund. More than 1,100 attorneys provided free legal services to over 1,700 Fund applicants. The value of the free legal services has been put at \$350 million ("No Victim Left Behind," 2004).

After the necessary data are assembled, the performance of the VCF can be compared with the transaction costs and time to disposition in other settings. The average time to disposition in aviation accident claims was 1.8 years for death cases between 1977 and 1982, and payments to plaintiff and defense lawyers were 42 percent of the net compensation received by plaintiffs (Kakalik et al., 1988, p. viii, xix). Average time to disposition for the VCF may well turn out to be greater than 1.8 years. The actual money paid for lawyers' fees and VCF administrative costs was likely less than 42 percent of net compensation to claimants, but after the value of unpaid or undercharged services is included, how VCF transaction costs compare with transaction costs in aviation wrongful death cases is not immediately clear. Aviation cases might not be the best comparison cases for the VCF because, as discussed above, liability is typically not contested in commercial aviation accidents. More-appropriate comparisons may be made to all tort cases or to recovery for losses from other terrorist attacks. Estimates of the legal costs for all tort cases in the United States run about 95 percent of net compensation to plaintiffs (Kakalik, 1988, p. xix), and it took 15 years to settle cases brought against Libya that related to the 1988 bombing of Pan Am Flight 103 over Lockerbie, Scotland. A final comparison could be made between the VCF and how the tort system would have operated had it been left unfettered after the September 11 attacks. It is difficult to imagine that the VCF did not resolve claims faster and more efficiently than the tort system would have given the size of the losses from the 9/11 attacks, the absence of the parties primarily responsible for the attacks, and the complicated liability issues.

The slow pace of enrollment in the VCF was surprising. As discussed above, less than half the families of those killed had filed claims with the VCF as of August 2003. There were significant conflicts that slowed resolution of claims and generated their own set of legal and other transaction costs. The fundamental issue was a disagreement over whether the intent of Congress with the VCF was to compensate economic loss, no matter how large. Lawsuits were filed against the VCF special master by high-income earners who argued that this was indeed the intent of Congress. The Department of Justice and the special master argued otherwise.

Other factors likely slowed enrollment in the VCF. Some families undoubtedly waited to see how the VCF would pay on claims similar to theirs. It also took time to reconstruct financial information that was destroyed in the attacks, and large payments by insurers and charities likely enabled many survivors to delay the decision to enter the VCF. For many, grief was a barrier to applying for VCF benefits. It was very difficult for the bereaved to assemble the information required to file a claim. One of the lessons of the VCF is that it may take one or two years after a tragic event before families are ready to deal with the compensation process.

Benefits for Emergency Responders Who Were Killed or Seriously Injured

As in the section on civilians, we first summarize the losses, in terms of fatalities and injuries, of emergency responders. We then review the benefits from insurance, the tort system, government programs, and charity that were paid to emergency responders who were killed or seriously injured following the 9/11 attacks. Finally, we summarize the benefits and then assess the equity and efficiency of those benefits.

Overview of Losses

The number of emergency responders who were killed or seriously injured as a result of the September 11 attacks ranges from 415 to 438, depending on the definition of uniformed responders. (All emergency responder deaths and serious injuries occurred at the WTC site.) The *Newsday* 9/11 Victims Database put the number at 415 (“Remembering the Lost . . .,” n.d.). The Twin Towers Fund, the major charity set up for emergency responders and their families, put the number at 438 (Twin Towers Fund, 2002, p. 3).⁴⁷ As discussed previously, we set the number of emergency responders killed at 425 for the purposes of our analysis.

Insurance

Those we interviewed who were familiar with the assistance and compensation received by uniformed responders believe that life insurance was not a significant source of compensation for this group. As discussed below, generous pensions are available to police officers and firefighters killed in the line of duty in New York City. Data are not available on the amount of life insurance carried by the uniformed responders killed in the attack on the WTC, but given the extensive pension benefits, it would not be surprising if the amounts of life insurance were low. The relative youth of uniformed police and fire personnel and the fact that a significant proportion of this population did not have dependents would also contribute to low life insurance levels.⁴⁸

FDNY, NYPD, and New York State and New York City corrections personnel are not a part of the New York State workers’ compensation system and do not collect workers’ compensation benefits. Those killed or seriously injured in the attack on the WTC used an alternate system that provides unlimited sick leave while on active duty. If a firefighter or police or corrections officer is permanently disabled while

⁴⁷ The Twin Towers Fund total includes 343 personnel employed by the New York City Fire Department, 23 personnel employed by the New York City Police Department, 82 employees of the Port Authority (36 of whom were eligible for the Twin Towers Fund benefits), three court officers in the New York Office of Court Administration, and 32 civilian rescue workers.

⁴⁸ According to a knowledgeable source we interviewed, approximately one-third of the uniformed responders who were killed or seriously injured had no dependents of any kind.

working, he or she is eligible for “disability retirement,” which pays 75 percent of the previous year’s income as a tax-free pension. Pension funds collected by personnel who retire without disability are subject to federal, but not state or city, taxes.

Tort

Emergency responders faced the same tort limitations as civilians killed in the 9/11 attacks. It appears that nearly all emergency responders who were killed or seriously injured opted into the VCF; information on how many of the approximately 70 estates pursuing wrongful death claims are those of emergency responders is not readily available.

Projected Tort Benefits. As with the analysis of civilians killed or seriously injured in the attacks, we do not attempt to estimate the amounts that emergency responders might ultimately recover through the tort system.

Government Programs

Victim Compensation Fund. Emergency responders who were killed or seriously injured in the attack on the WTC were eligible to apply for the VCF, just as was any other victim. There were, however, some special considerations for this group of claimants. First, for reasons discussed below, the Public Safety Officers’ Death Benefit payment was not considered a collateral source (even though government death benefits were listed as required offsets in the legislation establishing the VCF). Second, presumptive lifetime earnings for FDNY and NYPD personnel were calculated assuming that the deceased earned a salary based on 20 to 25 years on the force, regardless of tenure of service as of September 11. Finally, the deceased was also assumed to have earned a second salary that commenced after 20 to 25 years on the force that was of the same magnitude as the FDNY or NYPD salary.⁴⁹

It was reported to us by those familiar with the FDNY and NYPD cases that FDNY and NYPD personnel were slow in filing VCF claims, for a number of reasons. First, a dispute over whether the overtime hours paid to these officers would be pensionable needed to be resolved before the VCF special master could calculate presumptive lifetime earnings and the pension offset. Second, the FDNY officers were working without a contract at the time of the attack on the WTC. It was believed that a contract settlement was likely to include some retroactive salary adjustments (in fact it did). The families of victims on the FDNY force, therefore, waited for the contract to be resolved so that the higher salary numbers would be reflected in the presumptive lifetime earnings calculations.

Salary issues also led to delays in filing VCF claims on behalf of victims who were Port Authority employees. In spring 2002, it was finally decided that Port

⁴⁹ Many retired police officers and firefighters start a second career.

Authority rookies lost in the attack on the WTC would receive pensions at full salary. The families of Port Authority employees who wanted to apply to the VCF together had been waiting for this decision before filing their claims. In the end, a very high percentage of emergency responders killed at the WTC site received compensation from the VCF. Death awards were made to 416 emergency responders (Rayman and Henderson, 2004), which is 98 percent of the estimated 425 who were killed.

Projected Benefits from the VCF. Emergency responders received awards from the VCF, but figures on the average amounts were not available at the time this report was written. A number of factors make it difficult to predict how awards paid to emergency responders will differ from those paid to others who were killed or seriously injured. Emergency responders might have been paid less than many others who were killed in the attacks, but their annual earnings were bumped up when calculating awards, and the calculations also assumed that they would take another job after retiring. Also, interviewees noted that many firefighters and police officers hold second jobs while they are still on the force. The incomes from these jobs were considered by the VCF in calculating lifetime loss. Absent better information, we set average awards to emergency responders, after offsets, to be equal to the \$2.08 million average for all VCF awards. Total payments to the estates of the 416 emergency responders who received compensation from the VCF would then be approximately \$865 million. Adding an estimated amount received by seriously injured emergency responders raises the total to \$940 million.⁵⁰

Public Safety Officers' Death Benefit. The Public Safety Officers' Benefits Program (PSOB) of the U.S. Department of Justice pays all uniformed public safety officers \$250,000 if they die as a result of injuries sustained in the line of duty.⁵¹ The award was retroactively increased after 9/11 from the \$152,000 that had been in place for 2001. If those killed in the attack on the WTC left no children, the payment went entirely to the surviving spouse. If there were children, 50 percent was given to the surviving spouse and the remainder was split among the surviving children. If there were no surviving decedents, then the money was paid to whomever the officer designated as a beneficiary on the most recently executed life insurance policy. The statute establishing the PSOB Death Benefits Program expressly precludes that the benefits be subject to collateral offset provisions. Thus, the PSOB benefit was not considered a collateral source by the VCF.

⁵⁰ We assume that each of the estimated 35 emergency responders seriously injured received \$2.08 million on average from the VCF, for a total of \$73 million (see the discussion above on VCF payments to seriously injured civilians).

⁵¹ The Public Safety Officers' Benefits Act (42 U.S.C. 3796, et seq.) was enacted in 1976 to assist in the recruitment and retention of law enforcement officers and firefighters.

Projected Total PSOB Payout. Total payouts from the program would be approximately \$110 million if all 425 emergency responders received the \$250,000 benefit.

Pensions. Dependents of New York City police, firefighters, and corrections officers killed in the September 11 attack on the WTC while on active duty received annual pensions that amounted to 100 percent of the previous year's earnings.⁵² Pension monies were noncontingent, meaning that the surviving spouse could remarry and would still receive the pension for the rest of his or her life. If there was no surviving spouse, surviving children received the pension benefit until they reached 18, or 23 if they were full-time students. These pensions were funded jointly by New York City and the State of New York.⁵³ If there was no surviving spouse or dependent children, dependent parents were eligible for the New York City-funded portion of the pension but not the state-funded portion. These pensions were not subject to state or federal taxation. The pension (less the portion that was vested at the time of death) was treated as a collateral source by the VCF.

At the time of the 9/11 attacks, New York City police, fire, and corrections personnel were required to self-fund a percentage of their pensions. Depending on their age when they entered active service, the percentage ranged from 3.8 to 5. Beneficiaries of those personnel killed in the attack on the WTC (whether in the line of duty or not) were eligible for a refund of the entire self-funded portion of their pension, paid in addition to their full pension.

Because it took a number of days to determine whether there were any survivors at Ground Zero, Mayor Giuliani elected to pay all missing police and fire personnel (not Port Authority personnel) 320 hours of overtime. Once it was clear that these men and women had been lost, the overtime payments were halted. Both Mayor Giuliani and his successor, Mayor Bloomberg, hoped that these 320 hours of pay would be deemed "pensionable" by the New York State legislature (that is, included in the calculation of the pension). After a lengthy legislative battle, it was ultimately determined that these hours (at an average of \$40 per hour, approximately \$13,000 per person) were not to be considered pensionable.

Projected Pension Benefits. We were not able to obtain estimates of the pension benefits that the estates of emergency responders are expected to receive. As explained below, we use an indirect method to estimate their approximate size.

Mayor's Office Benefit. Most uniformed emergency personnel killed in the line of duty on 9/11 were eligible for the Mayor's Office Benefit, which in most cases was equivalent to one year's pay (Port Authority personnel were not eligible for this benefit). The mayor's office held off paying the benefit until the issue of whether the

⁵² A large part of these pensions can be thought of as employer-provided life insurance.

⁵³ The split depends on the years of service at the time of death.

overtime hours would be considered part of the previous earnings was resolved. After it became clear in May 2003 that these monies were not going to be considered pensionable, the mayor's office paid out the benefit to the families of the decedents. The Mayor's Office Benefit was considered a collateral source by the VCF.

Projected Mayor's Office Benefit. Although we were not able to obtain estimates of the total paid out through the Mayor's Office Benefit, as explained later, we used an indirect method to estimate its approximate size.

Other Government Programs. Families of deceased emergency responders were eligible for all federal and state government programs (with the exception of workers' compensation) that were made available to nonemergency responders. Other government programs providing benefits include tax breaks, State of New York crime-victim compensation, and FEMA programs. For a discussion of these programs, see "Government Programs for Civilians Who Were Killed or Seriously Injured" earlier in this chapter.

Charity

Family members of uniformed rescue personnel who were lost or seriously injured at the WTC site were provided charitable assistance from a number of sources. Like the families of those who were killed or seriously injured who were not emergency responders, they were eligible for assistance from the American Red Cross and The September 11th Fund (and from many other smaller charities that provided services and compensation to the families of the dead and seriously injured). Beyond these resources, a number of separate charities were established solely to meet the needs of uniformed rescue personnel. The scholarship programs described above for civilians were also available to the dependent children, spouses, and domestic partners of emergency responders. In addition, some of the scholarships were specifically targeted to this population. For example, the Dupont Scholarship Foundation and the Japan Relief Fund both provided scholarships to dependent children of police officers, firefighters, and other uniformed emergency response personnel who were killed as a result of the events of 9/11.

The five largest charities that specifically addressed the needs of family members of deceased and seriously injured emergency responders are the

- Twin Towers Fund
- New York Firefighters Disaster Relief Fund
- New York Police & Fire 9/11 Widows' & Children's Benefit Fund
- New York Police Department Foundation Heroes Fund
- Port Authority Police World Trade Disaster Survivors Fund.

Appendix C describes the programs of these five funds.

Projected Charity Benefits. According to the Foundation Center, survivors of uniformed rescuers killed or seriously injured in the attack on the WTC received \$473 million from charities (Renz, Cuccaro, and Marino, 2003). This total translates into approximately \$1.03 million for each of the 460 families. Some of these expenditures likely went to those who were injured in the attack but were not hospitalized in the immediate aftermath of the attack. However, it appears that the bulk of the money went to those who were killed in the attack. New York's Office of the Comptroller reported that deceased firefighters and ambulance workers received an average payment of \$1.04 million per family from charitable sources through August 2002 and that the families of police officers lost in the attack each received approximately \$900,000 (City of New York Office of the Comptroller, 2002, p. 8).

To complete our cost projection, we allocate 14 percent, or \$25 million, of the \$182 million raised for both civilians and emergency responders to emergency responders (based on the percentage of the dead and seriously injured who were emergency responders). Total charitable giving to emergency responders killed or seriously injured in the attack on the WTC thus approached one-half billion dollars or \$1.08 million per deceased.

Summary of Benefits for Emergency Responders Who Were Killed or Seriously Injured

Table 3.4 provides an overview of the benefits made available to emergency responders who were killed or seriously injured in the attack on the WTC. Neither life insurance nor tort appears to have played a significant role in providing benefits, but large benefit payments were made by pension plans, government programs, and charities. We do not have estimates of the amounts paid out through pensions or through the New York Mayor's Office Benefit and thus cannot directly estimate the amounts paid to emergency responders.

What can be said, however, is that emergency responders received more compensation relative to their economic loss than did civilians. Emergency responders received more because, first, the VCF appears to have more generously calculated adjusted lifetime income for emergency responders than it did for civilians. Second, emergency responders received a \$250,000 Public Safety Officers' Benefit and approximately \$880,000 more in charitable donations, neither of which was deducted from the VCF award.⁵⁴ Emergency responders, thus, on average received approximately \$1.1 million more than a civilian with the same economic loss.

⁵⁴ Emergency responders received approximately \$1.08 million in charitable contributions on average, and civilians killed or seriously injured received an estimated \$200,000 (see the "Projected Charity Benefits" subsection earlier in this chapter under "Benefits for Civilians Who Died or Were Seriously Injured").

Table 3.4
Benefits Provided Through the Four Compensation Mechanisms to Emergency Responders Who Were Killed or Seriously Injured in the Attack on the World Trade Center

Mechanism	Amount ^a (\$millions)	Payments Deducted from VCF Award?
Insurance	Minimal	Yes
Tort	Unknown	Ineligible for VCF if received tort awards
Government Programs		
Victim Compensation Fund	940	—
Public Safety Officers' Benefit	110	No
FEMA	Likely relatively small	Yes
Federal tax benefits	Unknown	No
Other government programs ^b	370	Noncontingent part deducted
Total quantified government benefits	1,420	
Charity		
Cash and services	470	No
Scholarships	30	No
Total quantified charitable benefits	500	
Total all mechanisms	1,920	

^aDollar amounts are rounded to nearest \$10 million.

^bIncludes pensions and Mayor's Office Benefit.

To provide a rough estimate of the total amount received by emergency responders, we make an approximation based on the increment emergency responders received relative to civilians. We estimated that each civilian killed or seriously injured in the attacks received at least \$3.1 million on average. If emergency responders' average economic loss was similar to that of civilians, average benefits to each emergency responder killed or seriously injured would be roughly \$4.2 million, after the additional charitable distributions and the Public Safety Officers' Benefit are added in. Total benefits to the 460 emergency responders would thus total \$1.92 billion. For Table 3.4, we used this total and calculated the amounts paid through pensions, the Mayor's Office Benefit, and other government programs as a residual.

Assessment of Benefits for Emergency Responders Who Were Killed or Seriously Injured

Equity Issues. While an emergency responder received greater compensation on average than did a civilian with a similar economic loss, further analysis is required to determine how the total benefits compared with economic loss and with combined economic and noneconomic loss. Similar factors that prevent an analysis of corrective justice for civilians apply to emergency responders. Individual data from the VCF on

projected lifetime earnings, collateral offsets, and awards are needed before a better sense of how the benefits received by emergency responders compared with losses.

The comparatively large benefits received by emergency responders who were killed or seriously injured in the attack on the WTC raised questions of equity among those we interviewed. Several interviewees argued that benefits were too high because preexisting salary and pension benefits accounted for the increased risk of death or serious injury on the job. These interviewees in effect argued that from a corrective justice standpoint benefits to emergency responders were too high. More frequently, respondents did not argue that emergency responders were overcompensated relative to their losses, but focused on distributional inequities. Some interviewees wondered why emergency responders who were killed in the attack should receive so much more than emergency responders killed in other settings (e.g., a firefighter who dies in a small fire). Others thought that the benefits emergency responders received were too high relative to the benefits other 9/11 victim groups received. In their view, it was not that uniformed responders received too much in the way of benefits, but rather that other needy groups had a much smaller share of their losses compensated.

Efficiency Issues. Families of dead or seriously injured emergency responders found the 9/11 aftermath to be as bewildering and overwhelming as the families of civilians who were killed or seriously injured. They faced the same complex maze of programs offering compensation and assistance. We heard a considerable number of complaints about the complex paperwork requirements of both charities and government programs. Family members of some deceased emergency responders feared that they had missed opportunities for assistance because of poor communication about program guidelines and eligibility requirements.

The attack on the World Trade Center challenged preexisting procedures at the NYFD and NYPD for addressing the needs of families of employees killed in the line of duty. Family members of the deceased or seriously injured were helped by a number of preexisting organizations both within and outside the FDNY and NYPD that historically played a significant role in assisting family members of uniformed service personnel killed while on active duty. However, these organizations had never dealt with fatalities on this scale.

The NYPD lost 23 personnel, and the FDNY lost 347. Existing organizations within the NYPD had a comparatively easier time addressing the needs of victims' families than did the existing organizations within the FDNY. Most of the NYPD response came out of its Employee Relations unit, which had traditionally been responsible for assisting the families of officers killed in the line of duty. The unit received resources and staff assistance from the New York City Police Foundation and other organizations. We interviewed NYPD personnel, as well as staff in organizations that provided assistance to emergency responders. Interviewees consistently reported that the NYPD 9/11 response effort was well coordinated, and the NYPD was

able, for the most part, to handle the demands placed on it as a result of losing 23 officers.

The story was different for the FDNY. Prior to September 11, the FDNY did not have a unit with formal responsibility for assisting family members of firefighters killed on duty. Instead, the fire department relied on an informal network of internal service providers who were called upon in the event of a firefighter fatality. Losses in the fire department fluctuated from year to year. For example, there were no line-of-duty deaths from 1996 through 1998. Between 1998 and September 11, 2001, 16 firefighters perished in the line of duty. As a result of the 16 deaths between 1998 and 9/11, the Fire Department had begun a process of formalizing its response procedures. This process took on a whole new form in the aftermath of 9/11.

The FDNY, like many other fire or police departments, is steeped in tradition. Many of those traditions dictate the manner in which line-of-duty deaths are handled—who is responsible for notifying the family, who attends and officiates at department funerals, and who assists grieving families. Many of these traditions were impossible to uphold given the scale of the FDNY's loss from the attack on the WTC. Senior fire department personnel (a number of whom were killed) could not personally communicate with all the victims' families. So many funerals were held for victims that standard protocol concerning attendance by the fire chaplain, the fire commissioner, and the mayor could not be followed. This was a cause of much disappointment and distress for many of the grieving families. Many of the family-assistance responsibilities had previously been handled by a small number of personnel, most of whom were at senior levels in the fire commissioner's office. This small group could not respond to all the needs of the families of the 347 victims on the FDNY, another source of disappointment for the grieving families.

After several chaotic weeks of attempting to address the needs of its victims' families by relying primarily on overstressed internal resources, a decision was made in November 2001 to bring in outside help. The Kenyon Corporation, a company with many years of experience in handling family assistance for the major airlines after a plane crash, was hired to direct the FDNY family assistance efforts. In January 2002, as New York City was transitioning to the Bloomberg administration, a new Family Assistance Unit was formally established. Although this unit was developed largely under the leadership of Deputy Fire Commissioner Lynn Tierney, the advent of the Bloomberg administration brought with it a new fire commissioner and a Family Assistance Unit head selected by the new commissioner (along with the subsequent departure of Tierney). This new unit was given responsibility for communicating with the victims' families and providing assistance with service referrals to support groups. Family members of any FDNY firefighter killed in the line of duty in the future will be supported by this new unit. One of the legacies of the attack on the WTC is a much more formal and coordinated response by the New York Fire Department to deaths of FDNY personnel in the line of duty.

Benefits for Those with Emotional Injuries and Injuries Due to Environmental Exposure

This chapter examines benefits for those who were affected physically or emotionally, but not killed or seriously injured,¹ by the attack on the World Trade Center. The two main types of injuries we address are (1) those involving exposure to the dust, debris, and smoke released by the collapse of the WTC towers and the subsequent fires and (2) emotional injuries. We address benefits for each type of injury in the following sections.

Benefits for Those Who Were Injured by Environmental Exposure to Hazardous Substances

In this section, we first summarize the losses from the dust, debris, and hazardous substances released by the collapse of the WTC and subsequent fires at the site. We then review the benefits from insurance, the tort system, government programs, and charity that were paid to individuals who were injured by these substances. Finally, we summarize these benefits and then assess their equity and efficiency.

Overview of Losses

The collapse of the World Trade Center and the subsequent fires released large quantities of dust, debris, and smoke into the air. Thousands of emergency responders, office workers, and residents were exposed to pulverized concrete, wallboard, ceiling tiles, computers, electrical equipment, and office furniture when the WTC collapsed. Little is known about the levels of toxic substances in the initial cloud generated by the collapse because air-quality monitors were not in place. The exposures to dust and smoke at the WTC site continued for months, and the effects of exposure to

¹ A *serious injury* is defined as an injury requiring admission to a hospital for one day or more in the immediate aftermath of the attacks.

substances on emergency responders and workers cleaning up the site were of greatest concern (Service, 2003).²

Outdoor exposure to hazardous substances decreased rapidly over time and with distance from the World Trade Center. The U.S. Environmental Protection Agency (EPA) and the New York City Department of Environmental Protection conducted extensive ambient air monitoring for asbestos around the WTC and in Lower Manhattan after the attack on the WTC.³ Overall, almost 10,000 air samples were collected. During September 2001, levels exceeding safety standards were found 30 times. Between October 2001 and May 2002, however, measured levels exceeded safety standards only seven times (U.S. Environmental Protection Agency, 2003d, p. 14). More than 35 percent of the 102 samples of outdoor settled dust collected through September 19 showed asbestos in amounts above the 1 percent threshold used by the EPA to indicate significant risk. However, levels of asbestos exceeding the EPA threshold were not found in the 42 samples collected between September 20 and September 25, 2001 (U.S. Environmental Protection Agency, 2003d, p. 83). In a draft risk evaluation of the health effects from exposure to outdoor air in Lower Manhattan, the EPA concluded that “except for the rescue and cleanup workers at Ground Zero who were not wearing respirators, as well as unknown exposures to the public during the first few days, persons in the area were unlikely to suffer adverse health effects from outdoor air” (U.S. Environmental Protection Agency, 2003d, p. 18).

There were indications of indoor exposure to asbestos, at least initially. In November and December 2001, the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) and the New York City Department of Health and Mental Hygiene tested air samples and samples of settled dust in 30 residential buildings in Lower Manhattan. Elevated levels of asbestos were not found in the air samples, but asbestos was found in 18 percent of the settled-dust samples (U.S. Agency for Toxic Substances and Disease Registry, 2002).⁴ Asbestos in settled dust is a concern because if the dust is disturbed, the asbestos may become suspended in air and then inhaled. Asbestos in the air was found in later testing, but only in a small number of residences. Of the 729 tests done in residences that were tested but not cleaned through July 2003 as part of EPA’s indoor residential cleanup program, asbestos in the air met EPA standards 95 percent of the time. Asbestos levels exceeded EPA standards in 1 percent of the samples and had not yet been determined for the re-

² Air quality around the World Trade Center improved markedly when the last fires were extinguished in January 2002.

³ We use the term *Lower Manhattan* to refer to the area south of Canal Street (see the map and discussion in Appendix D).

⁴ No asbestos was found in settled-dust samples collected from comparison areas above 59th Street in Manhattan.

maintaining 4 percent. The percentages were almost identical for the 3,436 residences that were cleaned before testing (U.S. Environmental Protection Agency, 2003d, p. 48).

Exposure to dust and smoke at the WTC site resulted in observable symptoms among the approximately 11,000 New York City firefighters who worked on or directly adjacent to the site after the attack:

- During the 48 hours after the attack, approximately 90 percent of the rescue workers reported an acute cough often accompanied by nasal congestion, chest tightness, or a burning feeling in the chest.
- In the first 11 months following the attack, respiratory medical leave incidents in the fire department were five times higher than during the 11 months preceding the attack.
- During the six months after the attack, 332 firefighters and one emergency medical service worker had a WTC-related cough severe enough to require four or more consecutive weeks of medical leave (“Injuries and Illnesses Among New York City Fire Department . . .,” 2002).

A federally funded monitoring program of those who worked at the World Trade Center site also found that many suffered from asthma, pneumonia, and bronchitis. Nearly 50 percent of 1,100 emergency responders and other site workers screened between July 2002 and April 2003 had ear, nose, and throat problems, such as nasal congestion, hoarseness, headaches, and throat irritation. Thirty percent had pulmonary problems, such as shortness of breath or persistent cough and wheezing (Rulon, 2003). At the time of this writing, it is too early to determine whether emergency responders and workers would contract lung cancer or other forms of cancer due to their exposure to substances at the WTC site.

The New York City Department of Health and Mental Hygiene conducted a door-to-door survey of 414 households in Lower Manhattan during October and November 2001. Symptoms reported more frequently that developed or increased after the attack on the WTC included nose or throat irritations, eye irritation or infection, and coughing. At the time of the interviews, one or more of these symptoms were a problem for 82 percent of the population (“Community Needs Assessment of Lower Manhattan Residents . . .,” 2002, pp. 10–13).

Insurance

Health Insurance. Many of those who developed symptoms from exposure to dust and smoke that was released from the collapsed World Trade Center received some medical attention. Care for firefighters and emergency medical service personnel were covered by employer-provided benefit packages. Health care costs for local residents and others were also likely covered at least in part by employer-provided or privately

purchased health insurance. Estimates of health insurer payouts for injuries from environmental exposure were unavailable as of January 2004.

Workers' Compensation. Those exposed to hazardous substances while at work or while fleeing from the WTC site were eligible for workers' compensation benefits. By the September 11, 2003, filing deadline for claims related to the attack, the New York Workers' Compensation Program had received 7,589 personal injury claims (Sullivan, 2004). As stated earlier in the report, the FDNY and NYPD do not participate in the workers' compensation system, so these claims were largely from civilians. The program provided some information on the 4,871 personal injury claims filed through December 2002. Of these, 40 percent were lost-time claims and 59 percent were medical-only claims (New York State Workers' Compensation Board, 2003b).⁵ The program received a surge of claims just before the September 11, 2003, deadline. Most of these claims were from people wishing to preserve their right to prosecute a claim in the future (Sullivan, 2004).

Projected Workers' Compensation Benefits. Data on payouts on workers' compensation personal injury claims related to the attack on the WTC are not available. However, information on average costs of personal injury workers' compensation claims in general allows us to make some estimates. Industry analysts estimate that the average cost of medical-only claims (59 percent of September 11 claims) in New York is \$660 (Cohen, 2004). A reasonable average for the lost-time claims is \$25,000.⁶ The weighted average cost per claim is thus approximately \$11,000. Roughly one-third of workers' compensation claims attributed to the attack on the WTC included a claim for stress (Sullivan, 2004). If mental health injuries accounted for one-third of costs and the remaining costs were for respiratory injuries, then costs for respiratory injuries would amount to approximately \$56 million.⁷

Tort

Approximately 1,700 emergency responders sued the City of New York for respiratory injuries allegedly suffered while responding to the attack on the WTC (Becker, 2004).⁸ As discussed below, most of these claimants accepted awards from the VCF. Approximately 600 of the 1,700 cases were withdrawn in December 2003, and based on information provided to the City of New York by attorneys representing the remaining plaintiffs, the City of New York expects nearly all the remaining cases to be withdrawn (Becker, 2004). One hundred and twenty firefighters alleged that their

⁵ A few claims were classified in the "other" category.

⁶ The expected cost of temporary disability claims in New York is \$9,010, and the expected cost of a minor permanent partial disability claim is \$49,380 (Cohen, 2004).

⁷ \$56 million is two-thirds of \$11,000 multiplied by 7,589 claims.

⁸ Ken Becker is one of the principal plaintiff attorneys representing emergency responders who were killed or injured in the attacks.

respiratory symptoms did not manifest themselves until after the December 22, 2003, filing deadline for VCF benefits (“9/11 Fund Fight Not at All Over,” 2004). These 120 firefighters are not eligible for the VCF and could conceivably turn to the tort system for compensation.

Claims were also brought against the City of New York and the Port Authority of New York and New Jersey by civilians who were not eligible for the VCF. Twenty to 30 workers who allegedly suffered injuries during the cleanup after the attack on the WTC filed suits against the Port Authority, and a similar number filed suits against the City of New York. These cases were being litigated in New York state as of early 2004.⁹ In March 2004, residents and workers in Lower Manhattan and Brooklyn filed suit against the U.S. Environmental Protection Agency alleging that the agency improperly allowed thousands of people to return to their homes and businesses after the attack. The suit alleged that the EPA allowed people to return “with no proper cleanup having occurred” (Gearty, 2004). The lawsuit seeks unspecified damages and reimbursement for cleanup costs and the establishment of a medical monitoring program for people who were exposed to dust after the attack. On September 10, 2004, the last day before the federal three-year statute of limitations on suits related to the terrorist attacks expired, a class-action lawsuit was filed on behalf of about 800 people who worked on the cleanup of the WTC site. The suit names Silverstein Properties and four construction companies that led the cleanup at the site, alleging that many workers did not have access to protective gear and those who did were not taught how to wear it properly. The plaintiffs seek a billion-dollar fund to pay for medical testing and “billions” of dollars in compensatory damages to pay for medical treatment. The plaintiffs’ lawyers also plan to file suit against the EPA, the Port Authority, and the Occupational Safety and Health Administration (Matthews, 2004; Rayman, 2004).

It is still unclear whether the tort system will be a substantial source of compensation for injuries from environmental exposure that resulted from the attack on the WTC. So far, it appears that no settlements or awards have occurred through the tort system, but a number of suits remain active, and additional cases may be brought by those who manifest symptoms of injury in the future. New York City and the Port Authority of New York and New Jersey are partially sheltered by liability caps (\$350 million in New York City’s case). We know of no liability cap for the U.S. Environmental Protection Agency.

⁹ Judge Alvin Hellerstein made a number of decisions on which cases did or did not fall under his jurisdiction in federal court. He decided that cases brought by emergency responders should be in federal court if the injury took place at Ground Zero and took place before October 29, 2001 (when the emergency effort switched from human recovery to cleanup). Other cases were to go to New York State court. The City of New York appealed this decision in fall 2003.

Government Programs

Victim Compensation Fund. The VCF received 7,396 total claims, approximately 4,200 of which were for personal injuries not involving death or hospitalization in the immediate aftermath of the attacks.¹⁰ Approximately three-quarters of the personal injury claims were filed in the last four months of the program.¹¹ The VCF special master estimates that 80 to 90 percent of these claims allege respiratory injuries, and a high proportion of those bringing respiratory claims were emergency responders (Feinberg, 2004). The respiratory claims were from most if not all of the 1,700 emergency responders who filed suit against the City of New York, emergency responders who did not file suit, and an apparently small number of civilians. The VCF ultimately paid 2,677 personal injury claims (U.S. Department of Justice, 2004b). According to the *New York Times*, rescue workers at the WTC and the Pentagon accounted for 1,919 (72 percent) of those receiving personal injury awards (Chen, 2004). After the personal injury claims from the estimated 250 people (see Chapter Three) who were hospitalized for one day or more as a direct result of the 9/11 attacks are removed, approximately 2,425 personal injury claims that are predominantly for environmental exposures were paid.

A total of 1,794 personal injury claims were denied. (Eligibility criteria for the VCF are described Chapter Three.) According to an attorney representing emergency responders, the VCF held firm on the requirement that claims brought by emergency responders must be related to injuries that occurred within 96 hours of the attacks, but was very liberal about the date by which medical care must have been sought (Becker, 2004). As discussed above, some emergency responders allege that their symptoms appeared after the filing deadline. The VCF did not accommodate these claims.

Benefits from the VCF. As reported in Chapter Three, VCF awards for personal injury claims were expected to total \$900 million, and we estimate that \$520 million went to the 250 serious personal injury claims. The remaining \$380 million went to the 2,425 claimants, for an average award of approximately \$155,000.¹²

Other Government Programs. Based on the needs identified during its door-to-door survey in Lower Manhattan between October 25 and November 2, 2001, the New York City Department of Health and Mental Hygiene initiated outreach

¹⁰ As detailed in Chapter Three, 2,879 death claims were paid, and an estimated 250 serious physical injury claims were paid.

¹¹ A total of 1,028 personal injury claims had been filed through August 14, 2003 (U.S. Department of Justice, 2003e).

¹² This \$155,000 average is consistent with what the Department of Justice Inspector General's Office found in its October 2003 audit. After one high-value award was excluded (it exceeded the next-highest award by \$5.5 million), the average payment made on 154 personal injury claims processed through August 14, 2003, was \$159,000 (U.S. Department of Justice, 2003e, p. 10).

efforts in Lower Manhattan neighborhoods.¹³ Informational materials were developed regarding environmental issues and related health problems, current air and dust testing results and their implications, recommendations for cleaning up indoor and outdoor areas and reducing exposure to hazardous materials, mental health issues, and availability of relief services.

FEMA provided funding to EPA for air-quality monitoring in Lower Manhattan and in locations downwind of Ground Zero. The total amount of funding provided was not made public. FEMA also funded a number of programs that went well beyond FEMA's typical disaster response. In early 2003, FEMA entered a \$90 million interagency agreement with the U.S. Department of Health and Human Services to screen and monitor emergency responders for long-term health effects (U.S. General Accounting Office, 2003b, p. 35).¹⁴ This program was specially authorized by Congress (Consolidated Appropriations Resolution, PL 108-7, 2003).

Neither FEMA nor the EPA had traditionally been involved in testing or cleaning private residences for hazardous substances (U.S. Federal Emergency Management Agency, 2002g, p. 25). After the attack on the WTC, however, the EPA offered to test and clean homes south of Canal, Allen, and Pike Streets for airborne asbestos. FEMA determined that the dust associated with the collapse of the World Trade Center was a type of debris and therefore reimbursed EPA for the cost of the program. The program was announced in May 2002, although the first cleanups were not done until September 2002 (U.S. Environmental Protection Agency, 2002a and 2002b). Through July 17, 2003, 4,166 households requested either testing only or cleanup and testing, and FEMA budgeted \$53 million for the program (U.S. Environmental Protection Agency, 2003d, p. 48). Program costs thus averaged approximately \$12,700 per household. According to FEMA, there were approximately 20,000 apartments eligible for the program, and only about 25 percent of those who were eligible requested testing or cleaning. As discussed above, asbestos was found in only a small number of residences that were tested.

Even though the Indoor Residential Cleaning Program was the first of its kind and problems were found in a very low percentage of residences, the program was criticized on several fronts. Residents were critical that the program was not announced until eight months after the disaster and did not actually get underway until a year after the attack. Restricting eligibility to residences south of Canal Street was criticized, as were the testing and cleaning procedures. In particular, the program was criticized for failing to require all apartments and all heating, ventilation, and air-conditioning systems within a building to be cleaned. Concerns were raised that failure to clean an entire building might lead to recontamination of units that had been

¹³ See "Community Needs Assessment of Lower Manhattan Residents . . .," 2002 for a description of the survey.

¹⁴ The data reported above on a subset of those screened between July 2002 and April 2003 are on initial product of this screening effort.

cleaned. The program was also criticized for using less-stringent cleanup standards than those required for a Superfund cleanup (the indoor cleanups were not conducted as a Superfund cleanup) (U.S. Environmental Protection Agency, 2003d, p. 50).¹⁵

A third program that went beyond the typical disaster response was a program to identify long-term pulmonary effects associated with exposure of residents and employees in Lower Manhattan to dust and smoke from the WTC collapse. The Agency for Toxic Substances and Disease Registry and the New York City Department of Health and Mental Hygiene led the effort and created a registry for long-term tracking and monitoring of the estimated 100,000 to 200,000 people who lived or worked near the World Trade Center site between September 11, 2001, and June 30, 2002. The program was announced in January 2003 and was scheduled to begin in spring 2003. The registry did not provide medical diagnoses or clinical examinations, but identified patterns of illness through periodic surveys of self-reported health status. FEMA had provided \$20 million in funding for this effort through 2003 (Seessel, 2003, p. 35).

Finally, FEMA provided \$1 billion in liability insurance to protect the contractors and the City of New York against liability claims resulting from debris removal at the World Trade Center site. Cleanup firms were not able to obtain from the private sector the insurance required by New York City contracts for the cleanup work. The FEMA-provided insurance covered the cleanup contractors and the City of New York for 25 years after the attack (U.S. Government Accounting Office, 2003b, pp. 26–27). The insurance will protect against liability claims that could potentially be brought by residents and nearby workers who were exposed to smoke and dust released during the cleanup.¹⁶ Cleanup workers also could conceivably bring cases not preempted by the workers' compensation system. The ultimate cost of the program will depend on the outcomes of the suits that are filed, if any, against the City of New York and the cleanup contractors.

Charity

The Red Cross established a number of programs that addressed health needs that were created by the attack on the WTC:

¹⁵ The cleanup standards for the Indoor Residential Cleanup Program corresponded to an increased lifetime cancer risk of 1 in 10,000 for each individual substance. The cleanup goals at a Superfund site correspond to a 1 in 1,000,000 increased cancer risk across all substances combined.

¹⁶ As initially passed, the federal liability insurance did not cover cleanup contractors and the City of New York from September 11 to 29, 2001. FEMA subsequently agreed to cover this period ("FEMA Agrees to Pay Cost of 9/11 Medical Claims," 2004).

- The Red Cross paid for costs associated with the EPA's cleanup program, such as costs of alternative housing during the cleanup and replacement of clothing and furnishing that were heavily contaminated. About \$1.9 million was paid to approximately 820 households (Lowry, 2004b).
- The Additional Assistance Program in 2003 provided short-term financial assistance and casework services to individuals who became disabled as a result of physical injuries, respiratory conditions, or mental health symptoms related to the attack. This program has so far assisted 175 households with an average payment of \$8,700 per household. Overall, \$10 million has been allocated for this assistance, which is scheduled to be distributed through September 2007 (Lowry, 2004a). The fraction of the total that will pay for respiratory problems is unknown.
- A long-term health care services plan paid uncovered health expenses directly related to injuries or illnesses caused or exacerbated by the attack. The program is expected to serve an estimated 600 people, but a budget has not been provided (American Red Cross, 2002a, p. 11).
- Grants totaling \$50 million were made to community-based organizations that offered physical health and mental health services (Lowry, 2004a).

The September 11th Fund made contributions to organizations that did health screenings and provided treatment. A total of \$3.75 million was provided to organizations such as Mt. Sinai Hospital, the Columbia School of Public Health, and the New York Committee on Public Safety and Health (Immerman, 2004). In addition to providing screenings and treatment for respiratory and other physical health problems, some grant recipients also conducted mental health screenings and referrals.

Summary of Benefits for Those Who Were Injured from Environmental Exposure

We have been able to piece together only a partial picture of the benefits related to potential injuries from exposure to dust and smoke and other substances released by the collapse of the World Trade Center and the subsequent fires. Quantified expenditures by the VCF and other government programs total \$540 million (see Table 4.1). Benefit payments by health and workers' compensation insurers likely also were substantial, but estimates of those payments are highly uncertain. Charities made payments, although it is difficult to isolate the expenditures for injuries due to environmental exposures from the expenditures for mental health care and other health needs. Charitable programs for those who were injured from environmental exposure due to the WTC collapse and subsequent fires may have totaled in the neighborhood of \$60 million. As of January 2004, people allegedly exposed to hazardous substances had not received compensation through the tort system, but potential liability remained. The \$1 billion in liability insurance provided by FEMA to the City of New

York and its contractors related to the cleanup up the World Trade Center site indicated the high degree of concern about potential injuries from exposure to dust and smoke generated at the site.

It remains to be seen what medical resources will be required to address the health effects over the long run from exposure to substances released by the collapse of the World Trade Center and how much will be paid by each of the four benefit mechanisms.

Assessment of Benefits for Those Who Were Injured from Environmental Exposure

Equity Issues. While there were significant shortcomings in the government response (discussed below), government agencies and charities eventually set up several programs that provided health monitoring and health care services for those who were injured from environmental exposures. Further data on the utilization of these programs is required before conclusions on whether the health care and monitoring needs of those affected by environmental exposures have been met. A major unknown is whether resources will be available to pay for health care for injuries that might appear in the future. Long-term health effects among emergency responders and site cleanup workers are the greatest concern. Employer-provided health care may be available to these groups, and they could pursue benefits through the tort system.

Table 4.1
Benefits Provided Through the Four Compensation Mechanisms to Those Who Were Injured from Environmental Exposure

Mechanism	Amount^a (\$millions)
Insurance	
Health insurance	Unknown
Workers' compensation	60
Tort	Unknown
Government Programs	
Victim Compensation Fund	380
FEMA funding of EPA monitoring	Unknown
Long-term health monitoring for emergency responders	90
Indoor Residential Cleaning Program	50
Registry and survey of those who lived or worked near the WTC site	20
\$1 billion in FEMA-provided liability insurance	Unknown
Total quantified government benefits	540
Charity	60
Total quantified benefits from all mechanisms	660

^aDollar amounts are rounded to nearest \$10 million.

From a corrective justice perspective, income losses and noneconomic losses must also be considered in evaluating the benefits for those who were injured from environmental exposures. The VCF made payments for loss of earnings and noneconomic losses to those who were eligible for benefits and applied to the VCF; however, individual data on income loss and awards for economic and noneconomic losses were not yet available as of this writing. Thus, it is not possible to determine the extent to which overall benefits received by those who qualified for VCF benefits compared with losses.

Those who were not eligible for the VCF may have recovered some wage loss and other economic loss through workers' compensation, disability, or other programs but would have to recover noneconomic damages through the tort system. FEMA-financed liability insurance provide a pool of resources from which tort claimants can draw. Successful recovery may be difficult, however, because plaintiffs must trace their injuries back to the attack. Linking injuries back to the attack may be particularly challenging for those who were not at the WTC site at the time of the attack or whose injuries were latent for a long period of time.

The overall response for compensating injury from environmental exposures raises some distributional justice issues among those who experienced environmental exposures. For example, noneconomic damages were available for some in this group, but not others. Also, benefits that were available to those with latent injuries appeared to be less certain than benefits available to those whose injuries were more immediately evident.

Efficiency Issues. The release of potentially hazardous substances that could affect a large number of people distinguished the attack on the WTC from most disasters. Government agencies did not handle the threat of harm from these substances as well as they could have, according to published sources and interviews.

The EPA was heavily criticized for prematurely assuring that the air was safe to breathe and that people did not need to be concerned about returning to their homes and workplaces in the days immediately following the attack. On September 18, 2001, EPA Administrator Christine Todd Whitman reassured the people of New York and Washington, D.C., that "their air is safe to breath [sic] . . ." (U.S. Environmental Protection Agency, 2003d, p. 9). The EPA inspector general later concluded that the agency did not have sufficient data and analyses to make such a statement and criticized the EPA for allowing the White House Council on Environmental Quality to influence the information that the EPA communicated to the public. According to the inspector general, the Council on Environmental Quality convinced the EPA to add reassuring statements and delete cautionary ones from

public statements (U.S. Environmental Protection Agency, 2003d, p. 7).¹⁷ The EPA's actions eroded public trust and ironically may have increased the demand for programs to address environmental health threats.¹⁸

EPA's premature statements that the air was safe to breathe may have also increased emergency responders' exposure to hazardous substances. Respirators were available to emergency responders, but often were not used. One reason for the low usage rate was likely the mixed messages that workers received about the importance of respiratory protection. Some interpreted the EPA's statement that the air was safe to breathe to apply to the WTC site (U.S. Environmental Protection Agency, 2003d, p. 43).¹⁹ Increasing the number and severity of injuries from environmental exposures obviously runs counter to economic efficiency goals.

Handling of indoor air pollution by both the City of New York and the EPA also had several shortcomings. During the first months after 9/11, there was no clear expectation that the EPA should be the lead agency for responding to indoor contamination, and the New York City Department of Environmental Protection (NYCDEP) initially assumed chief responsibility for this effort.²⁰ The NYCDEP was criticized for delegating testing and remediation efforts to building owners and residents, not enforcing proper procedures for cleaning asbestos, and giving improper advice on testing and cleaning procedures. The city did not request assistance from the EPA regarding residential sampling, reoccupation issues, or road debris cleanup (U.S. Environmental Protection Agency, 2003d, p. 21). It became clear to the EPA over time that the NYCDEP was not prepared to handle all the issues related to indoor air, and in February 2002, the EPA began taking the lead role on indoor air-pollution issues (U.S. Environmental Protection Agency, 2003d, p. 27).

The Indoor Residential Cleaning Program was the EPA's ultimate response to the indoor air pollution problem, but it wasn't until a year after 9/11 that the first cleanups were done. Further work is necessary to determine whether the benefits of

¹⁷ Congressman Jerry Nadler's office, whose district includes Lower Manhattan, accused EPA Administrator Whitman of misleading the public with her September 18 statement (Office of Congressman Jerrold Nadler, 2002, p. 3).

¹⁸ The director of the New York University–National Institute of Environmental Health Sciences Center observed that “premature declarations of ‘safety’ were in contrast to the ‘World Trade Center Cough’ experience of many people in Lower Manhattan,” and that “this increased both distrust of government and the public's concerns about health risks” (Seessel, 2003, p. 35).

¹⁹ Other possible reasons that respirators were not used include (1) a desire to save lives without regard for personal safety in the immediate aftermath of the disaster, (2) the respirators' interference with communication, and (3) lack of enforcement of requirements to wear respirators (U.S. Environmental Protection Agency, 2003d, p. 43).

²⁰ The EPA's lead role for responding to indoor contamination after a “major incident” was later confirmed by the July 2002 National Strategy for Domestic Security issued by the Department of Domestic Security (U.S. Environmental Protection Agency, 2003d, p. 28).

this program were worth the costs. As noted above, problems were found in only a small number of apartments.

The communication of health information was poor. EPA press releases at the end of September and beginning of October 2001 informed business owners and residents that they could clean their own spaces if they used “appropriate” vacuum filters and followed “recommended” and “proper” procedures. However the press releases did not define what “appropriate,” “recommended,” or “proper” meant (U.S. Environmental Protection Agency, 2003d, p. 25). The door-to-door survey of 414 Lower Manhattan residences mentioned above found that only 61 percent of households had received information about proper cleaning procedures and that only 45 percent were cleaned according to recommended methods (wet mopping hard surfaces and using high-efficiency particulate air [HEPA] filter vacuums on carpeting). Survey respondents also indicated a need for additional information regarding the health effects of exposure to dust and debris from the collapse of the WTC (“Community Needs Assessment of Lower Manhattan Residents . . .,” 2002). A study of day laborers who cleaned indoor spaces near the World Trade Center found that those laborers were not informed about the contents of the dust they removed from offices and apartments and were generally not provided with respirators or any other protective equipment. Most of those workers reported health symptoms that first appeared or worsened after September 11 (U.S. Environmental Protection Agency, 2003d, pp. 42–43).

Public trust in environmental protection agencies was low. A telephone poll of 511 residences in New York City in March 2002 found that 70 percent of those surveyed did not believe environmental and other government agencies when they said that the air quality around the WTC was safe (U.S. Environmental Protection Agency, 2003d, p. 42).

The government and charities ultimately did respond to the potential environmental health threats created by the WTC attack, but the response illustrated the shortcomings of the system then in place for dealing with environmental hazards. In its review of the EPA’s response to the attack, the EPA inspector general recommended that the EPA work with DHS and other agencies to determine how the federal government could assume a more direct role in addressing indoor environmental concerns (U.S. Environmental Protection Agency, 2003d, p. 30). FEMA concluded that in the event of future disasters it should enlist the expertise of the EPA earlier so that it can more quickly determine whether an environmental threat exists and, if so, begin cleaning efforts as soon as possible (U.S. Federal Emergency Management Agency, 2002g, p. 25). The government response also underscored the potentially dire consequences of letting concerns about resuming economic activity override an accurate portrayal of the risks.

Benefits for Those in New York City Who Suffered Emotional Injuries

In this section, we first summarize losses from the psychological effects of the 9/11 attacks. We then review the benefits from insurance, the tort system, government programs, and charity that were paid to individuals in New York City who suffered emotional injuries. Finally, we summarize the benefits and then assess the equity and efficiency of those benefits.

Overview of Losses

Disasters that cause extensive loss of life, property damage, and widespread financial strain generally induce severe psychological effects (Galea et al., 2002). These elements were all present in the September 11 attacks, and the psychological effects of the attacks on New Yorkers (and others) were significant.

The New York Academy of Medicine's Center for Urban Epidemiologic Studies found evidence of an elevated incidence of Post-Traumatic Stress Disorder (PTSD) and depression, the two most commonly studied mental health aftereffects of trauma and disasters, in New York City after 9/11. According to a survey conducted five to eight weeks after 9/11, of 1,008 adults living south of 110th Street in Manhattan, 7.5 percent reported symptoms consistent with PTSD and 9.7 percent reported symptoms consistent with depression. These rates were roughly twice the rates of PTSD and depression found in previous benchmark studies of the nation as a whole and they suggest that the attacks caused approximately 33,000 cases of PTSD and 46,000 cases of depression among New Yorkers living south of 110th Street (Galea et al., 2002).

A Web-based survey of 2,273 adults in the New York City and Washington, D.C., metropolitan areas one to two months after the attacks found that the prevalence of probable PTSD was significantly higher (11.2 percent) than in the rest of the country (Schlenger et al., 2002). Overall, the survey's authors concluded that distress levels in the rest of the country were within normal ranges two months after the attacks, but there were more than 530,000 cases of PTSD over and above the expected number of cases among adults in the New York City metropolitan area two months after the attacks.²¹ Subsequent surveys by Galea et al. (2002) found that the incidence of probable PTSD related to the attacks decreased quite rapidly. Incidence rates for the population south of 110th Street fell to 1.7 percent four months after the attacks and to 0.6 percent six months after the attacks.

While the psychological effects of 9/11 appear to have declined quite rapidly among the general population, the effects were much more pronounced and long

²¹ While stress levels outside the New York and Washington metropolitan areas may have been at normal levels one to two months after the attacks, stress levels across the country appear to have been higher immediately after the attacks. Schuster et al. (2001) found that three to five days after the attacks, 44 percent of the adult population across the country reported one or more substantial symptoms of stress.

lasting in certain subpopulations. Galea et al. (2002) estimated that the prevalence of probable PTSD was 37 percent six months after the attack on the World Trade Center for those who were in the WTC complex during the attack. The prevalence of probable PTSD was 24 percent for those who said that they had lost their jobs because of the attack. During the 11 months after 9/11, stress-related incidents among New York City firefighters were 17 times higher than during the 11 months preceding 9/11 (“Injuries and Illnesses Among New York City Fire Department . . . ,” 2002a, pp. 1–5).

Mental health needs may continue to be an issue for many years for certain subpopulations. Mental health needs related to the 1995 bombing on the Alfred P. Murrah federal building in Oklahoma City were higher two to three years after the bombing than in the period immediately after the bombing, and the Oklahoma City Community Foundation was still providing mental health services to approximately 36 people seven years after the bombing of the building (Strom, 2002). The American Red Cross anticipates that it will continue to provide mental health financial assistance for four to six years after the September 11 attacks (American Red Cross, 2002a, p. 11).

Insurance

In their analysis of the mental health costs from the attack on the WTC, Jack and Glied (2002) concluded that because the workers and residents in Lower Manhattan had high rates of private insurance “the bulk of the costs of treating these people is likely to fall on the private sector” (Jack and Glied, 2002, p. 338). Based on their discussions with key informants in New York City, Jack and Glied also concluded that the employee assistance programs available at many companies played an important role in providing counseling to employee groups in the aftermath of the attack on the WTC (Rosenblatt, 2002, p. 335).²² Data on the payouts from private insurers and employee assistance plans for mental health care stemming from the events of 9/11 are not readily available.

Workers’ compensation programs paid some mental health benefits. Roughly one-third of the 7,589 New York workers’ compensation nondeath claims filed in connection to the attack on the WTC included a component for emotional stress (Sullivan, 2004).²³ We project that workers’ compensation payments for emotional injuries will total approximately \$30 million.

²² According to a major provider of employee assistance programs, calls to such programs rose about 20 percent nationwide in the week after the attacks (Rosenblatt, 2002).

²³ The claims with a stress component include both claims for stress only and claims for physical injury and stress. Edelman (2002) reported that about one-third of the stress-related claims filed through May 2002 were disputed.

Tort

The tort system has not been nor is it likely to be a substantial source of compensation for emotional injuries not associated with a physical injury.

Government Programs

The Victim Compensation Fund did not provide compensation for emotional injuries. Benefits provided by other government programs were expanded, however. FEMA's Crisis Counseling Assistance and Training Program had been used in previous disasters to provide mental health services, but the scope and scale of this program was substantially expanded for victims of the September 11 attacks. Renamed Project Liberty, the program was funded at more than \$166 million, which was more than the amount committed for all previous disasters combined since 1974 (U.S. General Accounting Office, 2003b, p. 48). FEMA's Crisis Counseling Assistance and Training Program typically funds mental health services for up to nine months from the date of an award notice and allows funding extensions for up to three months, although it had been extended beyond 12 months for catastrophic disasters in the past (U.S. Federal Emergency Management Agency, 2002g, p. 5). Project Liberty was announced in March 2002, and was extended through December 2003, 21 months after the start of the program.

In the past, only individuals living in presidentially declared disaster areas were eligible for FEMA-funded mental health services. Because of the broad impact of the 9/11 attacks, however, mental health care services were made available to residents of New Jersey, Connecticut, Massachusetts, and Pennsylvania in addition to the disaster areas declared around New York City and the Pentagon (U.S. General Accounting Office, 2003b, p. 47). The program was available to any person who on 9/11 was living in or visiting the areas eligible for the program (Seessel, 2003, p. 30).

The scope of the mental health services provided by Project Liberty was also extended beyond what had typically been available for past disasters.²⁴ In August 2002, New York State received FEMA's approval to expand the scope of the Project Liberty program beyond short-term interventions and to assist individuals "who continue to experience trauma symptoms at levels resulting in substantial function impairment" (Seessel, 2003, p. 30). This expanded scope allowed the program to provide treatment for PTSD, depression, and anxiety, although there were still restrictions on the provision of medication, hospitalization, and long-term therapy (Seessel, 2003, p. 30). Project Liberty did not last long enough, however, to generate substantial expenditures for longer-term and broader care (Lowry, 2004b).

²⁴ The Crisis Counseling Assistance and Training Program typically provides short-term outreach, education, and referrals to mental health care.

Through March 2003, 643,710 people asked for short-term, one-on-one counseling through Project Liberty (Gittrich, 2003).²⁵ Project Liberty was lauded for providing crucial support to many people who otherwise might not have asked for it, including policeman and firefighters. But it was criticized for focusing on short-term care. Some experts concluded that a short-term focus might be appropriate for psychological aftereffects from most natural disasters, but not for the psychological aftereffects from a terrorist attack (Gittrich, 2003). The program was criticized also because it was not put into place until six months after 9/11 and because the length of time that it took many professionals to receive contracts slowed the provision of services (Ramirez, 2003).

The Office of Victims of Crime in the Department of Justice also provided funding for mental health services. The Office is authorized to provide mental health services when psychological trauma is caused by a criminal act. It can provide longer-term health services for up to four years and reimburse third-party mental health service providers (Seessel, 2003, p. 30). The Office of Victims of Crime received an appropriation from Congress to support counseling programs for 9/11 victims, family members of victims, and rescue workers (U.S. Federal Emergency Management Agency, 2002g, p. 27). The New York State Crime Victims Board administered the mental health program funded by the Department of Justice. The program was criticized for the length of time that it took to enroll beneficiaries and pay providers. The program typically takes eight months to enroll beneficiaries and six to eight months to pay claims, and the Department of Justice was not able to convince the New York State Crime Victims Board to make special arrangements for 9/11 victims (Lowry, 2004b).

Projected Government Benefits. As of July 2003, Project Liberty had obligated and disbursed \$99 million of its \$166 million budget (U.S. General Accounting Office, 2003b, p. 48).²⁶ The \$99 million included \$33 million that FEMA earmarked for New York City schools for counseling of students traumatized by the attack on WTC. According to a representative of a charity we interviewed, the school system was slow to disburse these funds. The Office of Victims of Crime disbursed \$15.3 million in grants for counseling services to the New York State Crime Victims Board. It also provided an additional \$11.2 million for victim assistance (i.e., services) and compensation (i.e., cash reimbursement) more generally. Some of these funds for services likely were for mental health counseling (U. S. Department of Justice, 2003d, p. 13).

²⁵ While not specified in the source material, this total likely covers the whole program, including requests from people outside New York City.

²⁶ The \$166 million budget includes funding for programs in New Jersey, Connecticut, and Pennsylvania. The amount of funding for services provided in New York City is not reported separately. We estimate that \$120 million was allocated for New York City.

Charity

The programs put in place by charities to address the emotional needs after the attack on the WTC may have been the most ambitious charitable response ever to mental health needs after a disaster. Through October 2002, the American Red Cross provided 236,000 mental health counseling visits, and 20,000 received mental health counseling and referrals paid for by The September 11th Fund (U.S. General Accounting Office, 2002b, p. 12).

A McKinsey & Company survey conducted in spring 2003, which was funded by The September 11th Fund, found a substantial need for mental health counseling that would not be met by existing funding allocations.²⁷ In August 2002, the American Red Cross and The September 11th Fund responded with a joint expanded mental health program—the 9/11 Mental Health and Substance Abuse Program.²⁸ The Red Cross program paid for up to 24 psychotherapy sessions, \$500 for psychiatric medications, and 30 days of mental health–related hospital care per beneficiary. The September 11th Fund provided reimbursement for psychotherapy, prescription drugs, and, in some cases, hospital care from any licensed mental health professional. Eligible persons included family members of the deceased, displaced residents, those evacuated from the World Trade Center and other nearby buildings, and children living below Canal Street and their families. An estimated 150,000 people are eligible for The September 11th Fund’s program, and the program will pay up to \$3,000 per person (“Groups to Pay Mental Health Costs . . .,” 2002). The September 11th Fund attempted to increase participation in the 9/11 mental health benefits program by allowing beneficiaries to choose their provider.

Projected Charity Benefits. The Red Cross and The September 11th Fund each committed \$50 million to the 9/11 Mental Health and Substance Abuse Program. However, program use has not been as high as either organization expected. The Red Cross has agreed to cover the September 11th Fund’s share of the costs and has allocated approximately \$20 million to the program through fiscal year 2008 (Lowry, 2004a). Lower-than-expected use of the program may be due to the high level of support provided by Project Liberty, insurers, employers, and other charities. The findings of Galea et al. (2002) also suggest that the need for mental health care diminished more quickly for most of the population after September 11 than the charities may have expected.

The Red Cross disbursed an additional \$3.8 million for mental health care apart from what was disbursed from the 9/11 Mental Health and Substance Abuse Pro-

²⁷ The survey asked detailed questions on respondents’ mental health status and concluded that 44 percent of the 121,000 households in New York City represented in the survey would need mental health services in the coming year, which would cost about \$68 million.

²⁸ The Red Cross and The September 11th Fund had started exploring options for mental health programs in October 2001 (Lowry, 2004a).

gram. The primary recipients were residents of Lower Manhattan and family members of those killed or injured in the attack on the WTC (Lowry, 2004b).

The New York Times 9/11 Neediest Fund played a role in elevating awareness of the impact of the events of 9/11 on mental health and made grants of more than \$5 million, chiefly to help with mental health care provider training and building provider capacity. The Neediest Fund also provided a weekend retreat program for families through its Fresh Air Fund (Haskell, 2003). The Robin Hood Foundation dedicated about \$2 million to mental health needs (Strom, 2002). Including funds provided by other charities and foundations, we estimate that charities as a whole will distribute at least \$40 million in mental health care benefits in the New York area.

Summary of Benefits for Those Who Suffered Emotional Injuries

As with the benefits for those who suffered injuries from the environmental effects of the collapse of the WTC, we have been able to piece together only a partial picture of the mental health benefits delivered in New York City after 9/11. The bulk of the expenditures that we were able to quantify were made by government programs (see Table 4.2). Payments by charities were substantial, although they were less than one-quarter of those of government programs. There is anecdotal evidence that private employee assistance programs and insurance played a significant role in providing mental health benefits after the attack on the WTC, but we have insufficient information to characterize the magnitude of the outlays. It is likely, however, that if the attack had occurred in a poor region of New York City rather than in downtown Manhattan, the burden on government programs and charities would have been substantially greater. Our best guess is that workers' compensation payments for stress-related claims will total \$30 million. The tort system is likely to play a small role in covering mental health costs.

Assessment of Benefits for Those Who Suffered Emotional Injuries

The effects of the attack on the WTC on the mental health of New York City residents appear to have been far more extensive than those from a more typical disaster. It should be noted, however, that except for important subgroups, the psychological effects appeared to decline quite rapidly after 9/11. Both government and charities realized that the need for mental health services went far beyond the capabilities of existing mental health programs. FEMA's Project Liberty was larger in scope and scale than its mental health programs in previous disasters. Congress provided a substantial supplemental appropriation for mental health benefits to the Office of Victims of Crime in the Department of Justice, and charities implemented unprecedented mental health programs.

Equity Issues. Generous charitable programs for both short-term and longer-term care augmented government programs and insurance for those with emotional

Table 4.2
Benefits Provided Through the Four Compensation Mechanisms for Those in New York City Who Suffered Emotional Injuries

Mechanism	Amount (\$millions) ^a
Insurance	
Health insurance	Unknown
Workers' compensation	30
Tort	Expected to be minimal
Government programs	
Project Liberty	120
Office of Victims of Crime	20
Total quantified government benefits	140
Charity	40
Total quantified benefits from all mechanisms	210

^aDollar amounts are rounded to the nearest \$10 million.

injuries who lived or worked south of Canal Street. Utilization of the charities' 9/11 Mental Health and Substance Abuse Program was lower than anticipated, perhaps indicating that demand was satisfied.²⁹ However, further analysis of the implementation, accessibility, and utilization of the various mental health programs is required before conclusions can be reached about whether the mental health care needs of those who lived or worked below Canal Street were met. Those suffering emotional injuries may also have experienced economic loss (such as wage loss due to inability to work) and noneconomic losses (such as suffering) due to their condition. Workers' compensation and short-term disability programs covered at least part of the economic losses in some cases, but we are not able to determine to what degree they did so. Benefits were not available for noneconomic loss.

Treatment needs for those who lived or worked above Canal Street likely were satisfied to a lesser extent than the treatment needs for those below Canal Street. This population was not eligible for many of the charity benefits available in the first few months after 9/11, and delayed implementation of Project Liberty may have meant that some initial needs were not met.³⁰ There was also a mismatch between the short-term nature of FEMA's mental health programs and the long-term mental health

²⁹ During our interviews, representatives of the Twin Towers Fund (which provided services and compensation to emergency responders) indicated that they had intended to implement an ambitious mental health program, but found that many of their proposed services were already being provided.

³⁰ The first grants under Project Liberty were not made until March 2002, and the Counseling Grants by the Office of Victims of Crime were not made until the end of April 2002 (U. S. Department of Justice, 2003d, p. 13). Charities did not expand their mental health programs until August 2002.

impact of a terrorist attack such as September 11, raising concerns that longer-term needs may not be met. FEMA's Crisis Counseling Assistance and Training Program typically provides short-term outreach, education, and referrals and provides program funding for up to nine months. These limitations may be appropriate for a flood or hurricane, but likely will not be adequate for a significant terrorist event. Emotional trauma may take years to surface and can last for many years more. The normal limitations on scope of benefits and program length were relaxed for Project Liberty, but even with the extensions, the program lasted just 21 months, which is not long enough to address many mental health problems that may develop.³¹

From the perspective of distributional equity, the main issue was the difference in benefits available to individuals south of Canal Street and those in other areas. In the course of our interviews, there was little discussion over whether the benefits for those with emotional injuries were too high or too low relative to benefits for other victim groups.

Efficiency Issues. FEMA's inspector general found that the availability of counseling services from multiple agencies was confusing to beneficiaries. The inspector general recommended better coordination between FEMA and the Office of Victims of Crime to minimize duplication of benefits and to ensure that victims obtained appropriate services (U.S. Federal Emergency Management Agency, 2002g, pp. 27–28). Particularly in the first several months after the disaster, services provided by charities were not well coordinated with one another or with the government.

The experience after 9/11 highlighted the limited mental health care infrastructure for disaster-related trauma in New York City and the need to assess what infrastructure investments should be made. Experts commented after the attacks that few mental health clinicians were trained to treat disaster-related trauma, and these experts also expressed concern that most clinicians could not provide very effective treatment (Strom, 2002). The New York Times 9/11 Neediest Fund responded to this concern by directing most of its mental health grants to provider training and capacity building. Both government and charitable disaster programs typically focus on funding services as opposed to training and capacity building for providers. The costs and benefits of building the capacity for mental treatment need to be assessed and investments made in areas in which the benefits would exceed the costs. In considering benefits, the gains from keeping workers with emotional injuries on the job should be considered.

³¹ Project Liberty officials had initially expected 2.5 million people to take advantage of the program, but only 643,710 had asked for short-term counseling through March 2003 (Grittrich, 2003). Some elected officials feared that some Project Liberty funds would not be used, or that funds would be lost or diverted to other projects (Ramirez, 2003). Failure to use all the funds allocated to the program could be due to a lack of demand, to bureaucratic problems in the way the program is implemented, or to a mismatch between the type of services offered and the type of services needed.

Benefits for Residents of Lower Manhattan

This chapter addresses benefits to cover losses not associated with personal injury that were made available to residents of New York City who were affected by the attack on the World Trade Center. These losses include property damage and expenses incurred as a result of the attack.¹

Overview of Losses for Residents of Lower Manhattan

The collapse of the World Trade Center shattered the windows of many residences and deposited a thick layer of dust and debris in those homes. Furniture and other personal property were damaged. Many residents needed to find alternative shelter because of area closures, dust and debris, interruptions in gas or electrical service, or structural damage. Estimates of the number of affected households range from 6,000 to 18,000 of the approximately 37,000 housing units south of Canal Street.² Most residents returned to their homes within a few weeks after the attack, although a small number were still not back in their homes a year later.³ Approximately 4,000 vehicles (some of which were commercial vehicles) were also destroyed (Hartwig, 2002, p. 3). While the number of residents displaced from their homes was large, it was not unprecedented. Hurricane Andrew displaced an estimated 180,000 residents when it struck southern Florida in 1992 (“After Andrew . . .,” 2002).

¹ Noneconomic losses are not relevant to the discussion in this chapter because noneconomic losses apply only to cases involving physical injury.

² The September 11th Fund estimates that people in 6,000 households below Canal Street were displaced from their homes after the attack (The September 11th Fund, 2002c); the Red Cross puts the number at 18,800 households (American Red Cross, 2002b). Estimates of the number of residential units south of Canal Street are from the Lower Manhattan Development Corporation (2002a, p. 13).

³ Ninety percent of residents south of Chambers Street and west of Broadway, who responded to a survey by McKinsey & Company, reported that they were displaced from their homes for more than a week. Ten percent had not returned to their homes eight months after 9/11 (McKinsey & Company, 2002). An August 2002 quarterly report from former senator George Mitchell’s office predicted that individuals in 20 households would be unable to return to their homes before October 2002 (Mitchell, 2002b, p.4).

Quality of life declined for residents of Lower Manhattan after the attack, whether they were displaced from their homes or not. Roads were closed and public transportation was disrupted both immediately after the attack and during the period needed to cleanup the WTC site and repair damaged buildings and infrastructure. Dust in the air degraded air quality, and a large number of jobs in Lower Manhattan were eliminated or relocated.

After a natural disaster, the bulk of FEMA funds for individual assistance tend to go to individuals whose residences have been damaged (U.S. General Accounting Office, 2002b, p. 6). Damage to residential property and displaced residents are nothing new to FEMA, and it was not the first time FEMA had dealt with this much damage to residences. What distinguished the attack on the WTC from natural disasters was, first, the fear of exposure to hazardous substances, and second, the extent of the impact on the economy and on the population of Lower Manhattan. Typical residential vacancy rates in Lower Manhattan before 9/11 ranged around 5 percent. The vacancy rate rose to 45 percent by the end of 2001 (New York City Partnership, 2002, p. 10). An estimated 70,000 workers south of Houston Street either lost their jobs or experienced wage reductions of at least 10 percent after 9/11 (DeVol et al., 2002, p.2).

Source of Benefits

This section describes the benefits that residents of lower Manhattan received from the four major funding mechanisms—insurance, government programs, the tort system, and charity.

Insurance

A large number of residents in Lower Manhattan received insurance payments to cover losses related to 9/11. Approximately 30,000 personal property claims (excluding auto claims) and 4,000 auto claims were filed through August 2002 in New York State (according to the Insurance Services Office, as reported in Hartwig, 2002, p. 3).⁴ Estimates of insurer payouts for damage to dwellings and autos range from \$475 million to \$575 million, amounting to an average of \$14,000 to \$17,000 per claim.⁵ We use the midpoint of this range in our benefits summary later in this chapter.

⁴ The Insurance Services Office (a private organization providing information and services to the insurance industry; see www.iso.com) reported that as of August 2002, an additional 1,500 personal property claims and 300 auto claims had been filed in Virginia due to the attack on the Pentagon.

⁵ The Insurance Information Institute estimates that less than 2 percent of insurers' September 11 losses were from dwelling and auto policies (personal lines) and that total losses would come to \$40 billion (Hartwig, 2002, p. 24). This implies less than \$800 million in insurer losses for dwelling and auto policies stemmed from 9/11.

Even though insurance payments for property damage stemming from 9/11 were substantial, it was not known what proportion of the individual property damage was covered by insurance. Those who owned their own homes likely carried insurance that covered at least some portion of the losses. A high fraction of the residents in Lower Manhattan were tenants, however, and a lower proportion of tenants as compared with homeowners would have likely carried insurance for personal belongings or the cost of alternative accommodations.

There were reports that insurers were inconsistent in how they handled claims. According to the office of Congressman Jerrold Nadler (2002, p. 15), insurers “settled claims with widely varying amounts paid” (presumably for similar types of claims). In the course of our interviews, however, we heard no complaints about insurance claims payments related to personal property or auto coverage.

Tort

According to those we interviewed, the tort system has not been and is not expected to be a substantial source of compensation for property damage, additional expenses, or reductions in the quality of life experienced by residents of Lower Manhattan. The same liability limits and procedural requirements that apply to lawsuits brought by residents also apply to any other parties who suffered losses due to the September 11 attacks (see Chapter Three under “Benefits to Civilians Killed or Seriously Injured: Tort” for a discussion of liability limits).

Government Assistance

President Bush declared New York City and the surrounding counties a disaster area after the September 11 attack, and the nation’s disaster assistance programs kicked in. Standard benefits were paid by a number of existing programs, some programs were expanded beyond their normal scope, and some altogether new programs were created. Several programs attempted to provide total or partial reimbursement for losses or expenses incurred due to the disaster, and others provided incentives to revitalize Lower Manhattan.

Disaster Housing Program. FEMA’s Disaster Housing Program reimbursed residents displaced by the disaster for the cost of temporary rentals or hotel stays and provided funds to clean residences. As shown in Table 5.1, this FEMA program dis-

The author of the study, Robert Hartwig, subsequently estimated that losses on these policies would run from \$600 to \$700 million (Hartwig, 2003). These estimates included both indemnity payments (payments to insureds) and costs of processing claims incurred by insurers (loss-adjustment expenses). Loss-adjustment expenses for personal lines of insurance (the private passenger auto and homeowners multiple-peril lines) typically average 15 percent of combined indemnity payments and loss-adjustment expenses (A. M. Best, 2002, p. 278). Thus, actual payouts on auto and dwelling policies are expected to range between \$500 and 600 million. Roughly 95 percent of the personal property and auto claims were in New York, reducing payouts in New York to between \$475 million and \$575 million. We expect all of these payments to be for losses in New York City.

bursed \$26.5 million to 5,287 applicants (\$5,012 per household) through August 15, 2002.

Small Business Administration Loans. The SBA made low-interest loans for home repairs and cleanup. However, only a modest number of residents took advantage of this program: 385 loans totaling \$5.7 million were made through September 2002 (\$14,805 per loan). As is discussed in Chapter Seven, every dollar loaned by the SBA costs taxpayers between 25 and 30 cents. Thus, the cost of the SBA loans to taxpayers was roughly \$1.4 to \$1.7 million.

Individual and Family Grants. Typically, FEMA's Individual and Family Grant (IFG) program gives relatively small grants for making a home habitable after a disaster or to replace essential personal property. For example, the IFG program might pay for basic pots and pans, but it would not replace high-quality kitchenware. Only those who do not meet the eligibility requirements of the SBA programs are eligible for the IFG program.

The IFG program was expanded to provide benefits to residents in New York City that had not been provided to others in past disasters. In May 2002, the program was expanded to pay up to \$1,500 for the purchase of air purifiers and vacuum cleaners and for the repair or replacement of air-conditioning units, regardless of household income or proof of adverse environmental impacts.⁶ All residents of New York City were eligible for this program. The IFG program received 129,106 applications and approved approximately 37,787 (29 percent) through November 14, 2002. Total payments totaled \$34 million, or \$900 per award.

FEMA's IFG and disaster housing programs were the object of frequent complaints by those we interviewed. Several interviewees thought FEMA was slow to set up its programs and slow to reimburse for housing and food expenses. According to some, FEMA questioned high food and housing costs, in part because it was unaccustomed to the high rates prevailing in New York City. Seessel (2003, p. 27) reported complaints about the confusing rules, delays in processing applications, small awards, high rejection rates, and poor public outreach. According to Seessel, FEMA said that part of the reason for the high rejection rate was that private charities had already met many of the needs covered by the program. One cause of the delay was the antiquated paper filing system used by the New York State Department of Labor to process applications (Seessel, 2003, p. 28).⁷

Indoor Residential Cleanup. The EPA's program to test and clean homes south of Canal Street for airborne asbestos as part of an effort to reduce exposure to environmental contaminants is described in Chapter Four. We mention it again here

⁶ The EPA began to release its air-quality findings around this time (U.S. General Accounting Office, 2003b, p. 49).

⁷ The IFG program in New York State was administered by the New York State Department of Labor.

Table 5.1
Overview of Direct Government Assistance to Residents of Lower Manhattan

Source	Eligible Population	Expenditures	Description of Benefits
FEMA's Disaster Housing Program	Those whose homes were uninhabitable following the attack on the WTC	8,957 applications were processed; 59 percent) were approved (\$26.5 million was paid through August 15, 2002 (U.S. Federal Emergency Management Agency, 2002g); total budget was \$3 million (U.S. General Accounting Office, 2003b, p. 49)	Hotel lodging or temporary housing rental; funds to clean residences
Small Business Administration home disaster loans	Those whose homes or possessions were damaged as a result of the attack; second homes are not eligible	385 loans for \$5.7 million were made through September 5, 2002 (Camp, 2002); cost to taxpayers is \$1.4 to \$1.7 million	Low-interest loans up to \$200,000 to repair or replace real property and up to \$40,000 to repair or replace personal property (Lower Manhattan Development Corporation, 2002a, p. 4); collateral required for loans over \$10,000
FEMA Individual and Family Grant Program (administered by New York State Department of Labor)	Those whose homes or possessions were damaged as a result of the attack and who did not qualify for an SBA loan; all residents of New York City were eligible for a vacuum cleaner and air purifier program; those outside New York City were considered on a case-by-case basis; the application deadline was January 31, 2003 (U.S. Federal Emergency Management Agency, 2002a)	129,106 applications were processed; 37,787 (29 percent) were approved; \$34 million was paid through November 14, 2002 (\$900 per granted applications) (U.S. Federal Emergency Management Agency, 2002g)	Expenses necessary to make home habitable and for necessary clothing and cars; medical and funeral expenses; payments for all benefits capped at \$14,800; cost of air filters and vacuum cleaner and air conditioner repair or replacement up to \$1,500 (U.S. Federal Emergency Management Agency, 2002a)
EPA Indoor Residential Cleaning Program (FEMA funded)	See Chapter Four for a description	See Chapter Four for a description	See Chapter Four for a description
Lower Manhattan Development Corporation Residential Grant Program (funded by U.S. Department of Housing and Urban Development)	Individuals and families who rented, purchased, or remained in housing in Lower Manhattan; application deadline was June 14, 2003	\$280.5 million was budgeted for the program; 36,554 residences were eligible for program; 31,000 applications for \$177 million in benefits were approved; \$106 million was dispersed as of July 2003; \$50 million was diverted to affordable housing (U.S. General Accounting Office, 2003b, p. 45)	\$1,000 for those who resided South of Canal prior to 9/11 and still lived there after 9/11; 30 percent rent reduction (up to \$6,000 or \$12,000 depending on location) for those who had a two-year lease; additional \$750 to \$1,500 to households with children and a one-year or two-year lease (Lower Manhattan Development Corporation, 2002a)

because the program could also be considered to address residential property damage caused by the attack. In this case, the property damage was caused by the deposition of potentially hazardous substances.

Lower Manhattan Residential Grant Program. The Lower Manhattan Residential Grant Program was another program set up especially for those affected by the attack on the WTC. The program was funded by the U.S. Department of Housing and Urban Development (HUD) and administered by the Lower Manhattan Development Corporation.⁸ Its purpose was to provide both compensation to residents affected by the attack and incentives to revitalize Lower Manhattan.⁹

Unlike the programs previously discussed, the awards were not tied to particular expenses or damages that resulted from the disaster. Compensation came in the form of a \$1,000 cash grant to all those who lived south of Canal prior to September 11 and still lived there at the time the award was given out (see Table 5.1) for the “significant inconvenience, disruption, and economic costs that these areas have sustained since September 11” (Lower Manhattan Development Corporation, 2002b, p. 10). Incentives to remain or move into Lower Manhattan were in the form of rent subsidies and lump-sum payments for signing leases. The program provided a 30 percent rent subsidy up to \$6,000 or \$12,000 dollars, depending on location, to those who signed a two-year lease to live south of Canal Street by June 2003. An additional \$750 to \$1,500 incentive was paid to each head of a household with children for signing a lease on a residence located below Canal Street.

HUD funds had not been used on such a scale either to compensate or to retain and attract residents after past disasters. The \$280.5 million price tag for the Lower Manhattan Residential Grant Program was substantial and swamps the amounts spent on all government programs for residents discussed in this chapter. The budgeted amount implies an average award of roughly \$7,700 for each of the approximately 37,000 households eligible for the program. Most of the outlays were for incentives to live in Lower Manhattan: Even if all 37,000 households received the \$1,000 cash grant, compensation would still account for only approximately 15 percent of the \$280 million budget.

Charity

Both the Red Cross and The September 11th Fund assisted residents who lived south of Canal Street (see Table 5. 2). The Red Cross paid \$49.8 million to 7,176 house-

⁸ The Lower Manhattan Development Corporation was created in the aftermath of 9/11 by Governor George Pataki and then-Mayor Rudolph Giuliani. Lower Manhattan was defined as the area south of Houston Street (Lower Manhattan Development Corporation, n.d.). See the map in Appendix D.

⁹ According to LMDC documents, the primary purpose of the program was to “provide financial assistance to Lower Manhattan residents in recognition of the personal, family, and living expenses they may have incurred as a result of the disaster” and to “encourage individuals to remain in, or move to, housing in Lower Manhattan” (Lower Manhattan Development Corporation, 2002a, p. 7).

holds to compensate those who were temporarily unable to return to their homes and for damage to homes or possessions. As FEMA's Individual and Family Grant Program had done, the Red Cross also reimbursed residents for air purifiers and high-efficiency particulate air (HEPA) vacuums. The September 11th Fund provided up to \$10,000 to each household to cover expenses and damages, mental health counseling, and legal assistance. In addition, it gave a \$2,500 gift to each household that was not tied to any documented expenses during the 2001 holiday season. According to the General Accounting Office, most of the 3,000 displaced households that were assisted by The September 11th Fund received between \$4,000 and \$10,000 (U.S. General Accounting Office, 2002b, p. 12). This implies that payments to displaced residents by The September 11th Fund totaled somewhere between \$12 million and \$30 million.

Between the Red Cross and The September 11th Fund, payments to residents of Lower Manhattan ranged from \$52 million to \$80 million. Funds were available from other charities, thus, for the purposes of our analysis, we set our estimate of charitable payments to residents at the upper end of this range.

Summary of Benefits for Residents of Lower Manhattan

As shown in Table 5.3, private insurance accounted for roughly one-half of the benefits going to residents of Lower Manhattan. Even though insurance payments were substantial, many residents did not have insurance that covered property damage and other expenses caused by the attack on the WTC. Tort remedies were limited for these residents, just as they were for the other victim groups. A government program of the scale of the September 11th Victim Compensation Fund was not made available to this group to replace lost tort rights. However, special programs such as the LMDC Residential Grant Program and enhanced benefits paid by existing programs augmented the standard government disaster assistance. Overall, government assistance to Lower Manhattan residents came to nearly \$350 million.

The benefits we were able to quantify for residents total roughly \$920 million. To put this number in perspective, the total comes to \$25,000 per household when spread across the approximately 37,000 households in Lower Manhattan.¹⁰

A survey by McKinsey & Company is another source of information on the benefits received by residents. Between March and May 2002, McKinsey & Company surveyed individuals in New York City who were affected by the attack on the

¹⁰ Some of these benefits were paid outside Lower Manhattan (payments by FEMA's Individual and Family Grant Program for air purifiers and air conditioners, for example), although those amounts are likely to be relatively small.

Table 5.2
Overview of Charitable Assistance to Residents of Lower Manhattan

Source	Eligible Population	Expenditures	Description of Benefits
Red Cross Liberty Fund Financial Assistance	Residents living south of Canal Street who were unable to return to their homes or whose homes were damaged	\$49.8 million paid to 7,176 residents through September 11, 2002 (\$6,970 on average) (Lowry, 2004a)	Assistance with relocation, rent, or mortgage; replacement of home furnishings; hotel stays; cleaning and storage; crisis counseling (Mitchell 2002b, p. 4)
Red Cross Liberty Fund Recovery Program	Residents south of Canal Street who were unable to return to their homes or whose homes were damaged	Expected to serve 18,800 households; budget not broken out for residents; entire budget for recovery program was \$133 million (American Red Cross, 2002b, p. 11)	Provided air purifiers and HEPA vacuums and helped with expenses incurred during displacement; assisted with expenses incurred during EPA cleanup (American Red Cross, 2002b, p. 11)
The September 11th Fund, Cash Assistance Program	Residents who lived below Chambers Street and west of Broadway	Most of 3,000 displaced families received \$4,000 to \$10,000 each from The September 11th Fund (\$12 million to \$30 million total) (U.S. General Accounting Office, 2002b, p. 12)	Eligible for cash assistance up to \$10,000 per person for expenses related to the attack on the WTC, including counseling and legal assistance; in addition, a \$2,500 gift check (The September 11th Fund, 2002a, 2002b)
Salvation Army		Unknown	Limited assistance for expenses not covered by other programs

Table 5.3
Benefits Provided Through the Four Compensation Mechanisms to Residents of Lower Manhattan for Property Damage and Other Losses Not Related to Personal Injury or Job Loss

Mechanism	Amount ^a (\$millions)
Insurance	
Dwelling and auto policies	500
Tort	Expected to be minimal
Government programs	
Disaster housing program	30
Low-interest loans	< 5
Individual and family grants	30
Indoor Residential Cleaning Program	50 (listed in Table 4.1 as a benefit to those injured from environmental exposure; not included in total here)
Residential Grant Program	280
Total quantified benefits	340
Charity	80
Total quantified benefits, all mechanisms	920

^aDollar amounts are rounded to the nearest \$10 million.

WTC, including residents in the immediate area of the attack (south of Chambers Street and west of Broadway). McKinsey found that 83 percent of residents surveyed reported receiving assistance from charities or the government, and that the average amount received was \$8,300 (McKinsey & Company, 2002). This total does not include insurance payments or payments from the Residential Grant Program and covers benefits received only during the first six months after 9/11.

Even with the unprecedented government programs, private insurance still provided more funds to the residents of Lower Manhattan than any other mechanism. The large amount paid by insurers illustrates the cost burden that would be placed on other benefit mechanisms or on residents themselves in the event of another catastrophe if residential property insurance were not available or were not purchased and if the goal of the compensation system is relatively complete compensation for affected residents.

Assessment of Benefits for Residents of Lower Manhattan

Equity Issues

Figures are not available on how the benefits provided to residents in Lower Manhattan compare with their financial losses. Across the many stakeholder groups repre-

sented by those we interviewed, residents in Lower Manhattan were not viewed as being undercompensated. McKinsey & Co. (2002) concluded that residents had no financial needs resulting from the attack that remained six months after the attack, although McKinsey did find a relatively small need for mental health services. Thus, from a corrective justice perspective, the compensation and assistance provided to residents appear to have covered a high proportion of the residents' economic losses.

The incentive programs for residents did raise some distributional equity concerns. Some criticized the Residential Grant Program for offering subsidies to households that were not located in Lower Manhattan at the time of the attack even though one of the explicit goals of the program was to induce households to move into Lower Manhattan. Others criticized the program for offering subsidies to those who would have remained in the area even without those subsidies. An advocate for immigrants and the poor faulted the program for focusing too many resources on high-rent areas and argued that the bulk of the subsidies went to higher-income households and building owners. It was the opinion of this interviewee that the money would have been better spent on affordable housing for lower-income households affected by the September 11 attack.¹¹

Efficiency Issues

Efforts to bring back residents to Lower Manhattan address efficiency goals of a compensation system. The aim of these efforts was to put underutilized housing resources back to work and increase the overall level of economic activity. The residential market in Lower Manhattan did recover. By summer 2003, the residential vacancy rate in Lower Manhattan was down to 1 percent and rents on some types of housing exceeded pre-9/11 levels (Herman, 2003).¹² According to the Alliance for Downtown New York, the population below Chambers Street grew by 6,000 to 29,000 between the 2000 Census and mid-2003 (Herman, 2003).¹³ We do not know, however, what role the Residential Grant Program played in the recovery

¹¹ The amount of money that went to high-income households was clearly a sensitive issue. Seessel observed that up to \$14,500 per applicant was available for new leases in Battery Park City and Tribeca compared with only \$7,750 per applicant for new leases in Chinatown, even though the median household income in Chinatown was only one-third of the \$125,000 median household income in Battery Park and Tribeca (Seessel, 2003, p. 21). In a report submitted to the U.S. Department of Housing and Urban Development in October 2002 (Lower Manhattan Development Corporation, 2002c, pp. 4–5), LMDC emphasized that nearly one-third of the 37,000 households expected to benefit from the program would be low- and moderate-income and that more than one-half of the grants approved in September 2002 went to low-income households (the proportion of funds going to low-income households was not specified).

¹² Rents for studios and one-bedroom apartments in Lower Manhattan were below pre-9/11 levels, but rents had fallen across the city. Rents for two-bedroom apartments in Lower Manhattan exceeded pre-9/11 levels (Herman, 2003).

¹³ The Alliance for Downtown New York is the Business Improvement District serving the area south of Chambers Street. It provides supplemental security and sanitation; economic development; streetscape, design, and transportation services; marketing and enhanced tourism programs; and special events.

process. Before determining whether the program was economically efficient, the cost of the program needs to be compared with the benefits from it. The security ramifications of encouraging large numbers of people and businesses to return or relocate to Lower Manhattan should also be considered.

The benefits programs that were put in place for New York City residents after September 11 illustrate some of the possible synergies and conflicts between equity goals and efficiency goals of a compensation system. The Residential Grant Program, for example, made some payments to high-income individuals, which was consistent with goals to revitalize the area, but raised the ire of people who believe that government assistance should be focused primarily on lower-income households.

As far as implementation efficiency is concerned, the disbursement of large amounts of money, often in a very short period of time, is to be commended, but there were shortcomings in this area. For instance, FEMA was roundly criticized by those we interviewed. Respondents from virtually all stakeholder groups believed that FEMA'S response was slow and not well tailored to the particular conditions in New York City. FEMA case workers based in Texas who did not even know where Canal Street was and the lack of Chinese-speaking staff are two examples of FEMA's being ill prepared to serve this particular client base.

Problems in coordination between charities and FEMA in providing benefits to residents became evident after 9/11. Charities moved much more quickly than did FEMA and distributed funds in volumes that far exceeded the amounts they would typically distribute. According to several representatives of charitable organization we interviewed, some FEMA staff expressed displeasure that certain charities were usurping FEMA's disaster relief role, but the charities concluded that the urgency of the situation compelled them to act.

FEMA legally cannot cover losses that have already been reimbursed by insurance, charity, or other sources. In past disasters, FEMA had not considered assistance by charities to be duplicative, but the size of charitable distributions after September 11 made the issue of duplicate benefits more important. However, FEMA continued to treat assistance from charities as being nonduplicative after September 11, in part because it concluded that the cost of identifying and quantifying aid from other sources on a case-by-case basis would have further delayed the provision of benefits (U.S. Federal Emergency Management Agency, 2002g, p. 32). The result was that some individuals likely received benefits from both FEMA and charities to cover some losses. Both the U.S. General Accounting Office (now the Government Accountability Office) and FEMA's inspector general concluded that there needs to be better coordination between FEMA and charities in the event of a future disaster. However, there are costs associated with increased coordination, and further analysis is necessary to determine whether the benefits of improved coordination over the long run would exceed the costs of achieving those improvements.

Benefits for Workers in New York City Economically Affected by the Attack on the World Trade Center

So far in this report, we have discussed the 9/11-related benefits provided to those who were killed or suffered serious personal injury, who were not killed or seriously injured but were physically or psychologically affected, and whose property was damaged or destroyed. In this chapter and the next, we turn our focus to income losses in the New York City area resulting from the events of 9/11. We examine the benefits available to workers in New York City who lost their jobs or who suffered a substantial decline in income due to the attack on the World Trade Center. (In Chapter Seven, we examine the benefits provided to New York City businesses to cover both income loss and property damage.) As will be shown, the income losses caused by 9/11 were tremendous, as were the resources that were made available to cover those losses.

Overview of Workers' Losses

The events of September 11 had a major impact on employment in New York City and caused layoffs and reductions in work hours around the country. More than 70,000 people worked at the World Trade Center and another 70,000 visited each day ("World Trade Center," 2003). The Federal Reserve Bank of New York estimated that the number of private-sector jobs in New York City was between 38,000 and 46,000 lower in October 2001 than it would have been otherwise (Bram, Orr, and Rapaport, 2002, p. 7).¹ Projected numbers of lost jobs peaked at between 49,000 and 71,000 in February 2002 before easing to between 28,000 and 55,000 by June 2002. A job decline of 71,000 amounts to 2.3 percent of the 3.15 million private-sector jobs in New York City that existed immediately preceding the World

¹ The New York economy was trending downward before 9/11, and this study attempts to control for economic declines that would have occurred in the absence of the attack on the WTC. It is also possible that the attack caused some economic activity to be shifted from the period after 9/11 to a period later in time. This study does not address such a possibility.

Trade Center attack.² The attacks also reduced the number of hours worked. The Fiscal Policy Institute estimated that roughly the same number of workers avoided layoffs by working fewer hours as were laid off (Fiscal Policy Institute, 2001, p. 2). Overall, the Federal Reserve Bank of New York estimates that the attack on the WTC caused wage and salary earnings in New York City to decline between \$3.6 billion and \$6.4 billion through June 2002 (Bram, Orr, and Rapaport, 2002, p. 9).

Workers in some industries were more affected than others. Various studies concluded that the finance, restaurant, hotel, air transportation, wholesale trade, and retail trade were most affected (Parrott, 2002; Bram, Orr, and Rapaport, 2002, p. 7). Both low-wage (e.g., restaurants and retail trade) and high-wage (e.g., finance) industries were represented.³ According to the Fiscal Policy Institute, 60 percent of those who were laid off worked in industries in which the average wage (the average of the median wage in each industry) was \$11 an hour (Parrott, 2001). The Fiscal Policy Institute also estimated that 56 percent of those who lost jobs in New York City during the last three months of 2001 due to the attack were immigrants, and 10 percent of those who lost jobs were undocumented workers (Fiscal Policy Institute, 2002).

The effects on workers rippled across the country. DeVol et al. (2002, p.1) predicted that major tourist destinations such as Las Vegas, Myrtle Beach, and Honolulu and the largest cities—New York, Los Angeles, and Chicago—would suffer the heaviest job losses. Dixon (2002, p. 5) found substantial declines in air traffic and hotel and motel occupancy in California in the initial months after the attacks.⁴

After a natural disaster, economic activity typically recovers in the quarter following the event (DeVol, 2002, p. 2). Recovery did not occur as quickly after 9/11. McKinsey & Company found that six months after 9/11, two-thirds of the workers south of Houston Street who either lost their jobs or whose incomes declined more than 10 percent due to the events of 9/11 continued to suffer an income drop of more than 25 percent, and 40 percent were still unemployed (McKinsey & Company, 2002, pp. 6, 14). The length of unemployment has been, if anything, longer than the average time out of work for workers laid off from their jobs for economic

² Estimates of the job loss vary. The Fiscal Policy Institute in New York City puts the loss at 73,900 jobs in the fourth quarter of 2001 (Parrott, 2002). In January 2002, DeVol et al. (2002) estimated that the attack would cause jobs to be 149,200 fewer in 2002 than they would have been otherwise. The New York City Office of the Controller estimated that the number of jobs fell by 83,100 between September 2001 and July 2002 (City of New York Office of the Comptroller, 2002, p. 9).

³ The wages of some workers went up because of the attack (e.g., public safety personnel working overtime).

⁴ Some of these declines were undoubtedly offset to some extent by increases in tourism or recreational spending in other areas. Tourists may have switched to travel destinations within driving distance—the so-called drive market. The result may have been that job losses in New York City were to some extent offset by increases in jobs in other geographic areas.

reasons in other settings.⁵ The effects of 9/11 on workers, thus, appear to be more similar to the effects of the elimination of positions or insufficient work rather than the more transient effects of most natural disasters.

Many workers also had less time to prepare for layoffs than they would have had in nondisaster circumstances. For example, federal law requires employers to provide 60 days' notice in advance of a plant closing or mass layoff covered by the law.⁶

Source of Benefits

Aid for workers affected by the events of 9/11 came from government programs and charities. The tort system and private insurance mechanisms provided little, if any, aid to workers for income loss not related to personal injury. In the following sections, we detail the benefits provided by government programs and charities.

Government Assistance

The existing social safety net provided substantial benefits to displaced workers. In addition, eligibility criteria and benefits were expanded or flexibly interpreted, and some entirely new programs were established. Table 6.1 provides an overview of the main government programs.

Unemployment Benefits. Unemployment benefits generally are available to workers who are laid off from their jobs and were thus available to workers who lost their jobs due to the events of 9/11. Undocumented workers are not eligible for unemployment benefits. Large numbers of displaced workers in New York City took advantage of the program. More than 260,000 New York City workers filed initial unemployment claims in the six months following 9/11 (Parrott, 2002). The Fiscal Policy Institute reported, "Nearly six months after September 11, the number of workers filing for unemployment insurance is still 20 percent higher than a year ago, a period when the recession had already started to push up unemployment filings in New York City" (Parrott, 2002, p. 3). If the entire 20 percent increase was due to the attack, then 43,000 unemployment claims were due to the attack during the first six months after September 11.⁷ It is difficult to know how many initial unemployment

⁵ For example, 35 percent of workers who were laid off between 1997 and 1999 were still unemployed five months later, and 18 percent were unemployed nine months later (Fronstin, 2002, p. 12).

⁶ These requirements were established in 1989 by the Workers Adjustment and Retraining Notification Act ("WARN Act Guide to Advance Notice of Closings & Layoffs," 2003).

⁷ If the 260,000 initial unemployment claims number 20 percent higher than those of a year earlier, then the amount of claims a year earlier must have been 217,000 ($260,000/1.2$). The increase in unemployment claims is thus 43,000.

Table 6.1
Overview of Direct Government Assistance to New York City Workers Economically Affected by the World Trade Center Attack

Source	Eligible Population	Expenditures	Description of Benefits
Unemployment Benefits (U.S. Department of Labor, New York State Department of Labor, other state labor departments)	Those who are laid off, whether or not due to a disaster; workers anywhere in the United States are eligible; undocumented workers are not eligible	Approximately \$600 million in New York City alone	Paid proportion of wages, with a cap; Congress extended benefits to 39 weeks, and 52 weeks in some states
Disaster Unemployment Assistance program (funded by FEMA, administered by New York State Department of Labor)	Those who were unemployed because of the attack but who did not qualify for standard unemployment insurance (e.g., self-employed, those who had started working only recently, those who used up their standard unemployment benefits); eligible individuals must have worked in the declared disaster area; undocumented workers are not eligible	6,679 applications were processed; 3,284 were approved, \$13.2 million was paid through October 2002 (U.S. Federal Emergency Management Agency, 2002g, p. 6)	26 weeks of benefits equivalent to standard unemployment insurance; minimum was \$126 per week in New York State; benefits were reduced by workers' compensation, disability insurance, union payments, and other sources of income (Seedco, 2002b, p. 46)
FEMA Mortgage and Rental Assistance Program	Eligible individual must have been legal resident; shown at least a 25 percent reduction in income due to 9/11; received late payment notice on rent or mortgage; worked in Manhattan, economically dependent on a firm in Manhattan, or commuted from Manhattan and suffered financially because of the attack (U.S. Federal Emergency Management Agency, 2002e); deadline to apply was January 31, 2003	\$194 million was dispersed through July 31, 2003, and \$200 million was budgeted (U.S. General Accounting Office, 2003b, p. 47); 11,818 applications were processed; 6,187 were approved; \$41.5 million was spent through August 15, 2002 (U.S. Federal Emergency Management Agency, 2002b)	Rent or mortgage payments until household becomes financially stable for up to 18 months (U.S. Federal Emergency Management Agency, 2002d, p. 7); monthly payments averaged \$1,140 (Chen, 2002a)
Disaster food stamps (funded by FEMA, administered by the New York City Human Resources Administration)	Residents of New York City whose income was reduced because of the attack; program ended October 31, 2001	\$3.8 million worth was administered to 33,000 individuals through January 9, 2002 (U.S. Federal Emergency Management Agency, 2002b)	Food stamps were available through October 31, 2001
Disaster Medicaid (funded by federal, state, and New York City governments)	Low-income individuals and families with dependent children; program ended January 31, 2002	Enrollment rose 388,000 between September 2001 and February 2002	Provides medical assistance

Table 6.1—Continued

Source	Eligible Population	Expenditures	Description of Benefits
Training programs and employment services (funded by national emergency grant, administered by New York State Department of Labor)	Those in New York State impacted by the attack	Grants provided to 14 organizations offering services; \$25 million budget (Lower Manhattan Development Corporation, 2002a, p.14)	Job training, placement services, career counseling, access to job banks
Training programs and employment services administered by the Consortium for Worker Education	Workers in New York City displaced either directly or indirectly by the September 11 attack	\$32.5 million budget (Seessel, 2003, p. 36)	Job placement assistance, career counseling, education and training
Training voucher program	Workers in New York City, but details on geographic areas that were targeted were not provided	Not available	\$5,000 training vouchers for jobs in occupations that are in high demand (Lower Manhattan Development Corporation, 2002a, p. 14)
New York City Human Resources Administration	Residents of five boroughs of New York City	Not available	Variety of career counseling and job bank services

claims were due to the attack as opposed to normal job turnover or the economic downturn that had begun before the attack. The estimated 43,000 increase in unemployment claims is at least consistent with estimates of job losses in New York City due to 9/11, however.

Unemployment benefits are tied to a worker's wages but are capped at moderate amounts. For the State of New York, the maximum weekly benefit in 2002 was \$405 and the minimum was \$126 (New York State Department of Labor, 2002). Thus, unemployment benefits replaced only a small proportion of a high-wage earner's income. In addition, workers whose hours were reduced because of the attack, but who were not laid off, were not eligible for unemployment benefits.

Unemployment benefits typically last 26 weeks but are often extended by Congress during economic downturns. In March 2002, Congress authorized funding for the Temporary Extended Unemployment Compensation program (PL 107-147). The program extended unemployment benefits for 13 weeks for unemployed workers in all states. An additional 13 weeks of unemployment were available in states where the unemployment rate exceeded a certain level.⁸ The Temporary Extended Unemployment Compensation program originally ended on December 28, 2002, but was extended through December 31, 2003 (U.S. Department of Labor, 2003a).

In the course of our interviews, we did not hear of problems with the disbursement of unemployment benefits (although we did hear complaints about the size of the payment). Many pointed out that undocumented workers were not eligible for unemployment benefits.

Projected Unemployment Benefits. The outlays for unemployment benefits paid as a result of the events of 9/11 were quite large. We were not able to obtain figures on benefits paid in New York City, but the increase in unemployment benefits in New York State provides a way to estimate the unemployment benefits paid in New York City due to the attack on the WTC. Unemployment benefits in New York State as a whole averaged \$196 million per month between January and August 2001.⁹ If monthly benefits had remained at the pre-9/11 rate, the total paid between October 2001 and September 2002 would have been \$2.357 billion. Actual payments in New York State during the 12 months following 9/11 totaled \$3.981 billion, a \$1.6 billion increase (U.S. Department of Labor, 2003b). A reasonable lower bound for the proportion of state benefits paid to unemployed workers in New York City is 50 percent,¹⁰ and the economic forecasts by the Federal Reserve Bank of New

⁸ Unemployment rates were not high enough in New York State to trigger the additional 13 weeks of payments (Sznoluch, 2003).

⁹ We go back only to January 2001 because unemployment payments rose significantly at the end of 2000.

¹⁰ The number of employed workers in New York State was 7.35 million in 2000, according to the 2000 Census (U. S. Census Bureau, 2003). Thus, the 3.15 million jobs in New York City prior to 9/11 accounted for 42 percent of the total jobs in New York State. The effects of 9/11 were concentrated in New York City, so it seems

York suggest that 50 percent to 75 percent of the decline in New York City employment in the nine months after 9/11 was due to the terrorist attack. These proportions imply that the attack caused unemployment benefits in New York City to rise between \$400 million and \$600 million in the 12 months following 9/11 (October 2001 through September 2002).¹¹ Because it seems plausible that payments to New York City workers accounted for more than 50 percent of unemployment benefits after 9/11, and because some benefits that were due to the attack were likely paid after September 2002, we set our estimate for benefits paid due to 9/11 at \$600 million—the upper end of the range.^{12, 13}

Overview of FEMA’s Individual Assistance. Business interruption, job loss, and reduction in wage income are not primary concerns after most natural disasters. According to a FEMA official, “Most [natural] disasters are floods and don’t result in loss of jobs” (Seessel, 2002b, p.7). FEMA’s individual assistance programs are geared toward reimbursing people for homes and autos that are swept away in floods, with the bulk of payments after most disasters going to people whose residences are damaged (U.S. General Accounting Office [now the Government Accountability Office], 2002b, p. 6). The losses caused by the events of 9/11, however, were different. Relatively few homes were damaged, but many people needed unemployment assistance and help in paying their rent. In response, FEMA activated seldom-used programs and expanded the benefits paid under others.

Disaster Unemployment Assistance. FEMA’s Disaster Unemployment Assistance (DUA) provides assistance to workers who are out of work because of a presidentially declared disaster but who do not qualify for regular unemployment benefits. To qualify, workers must be out of work as a “direct result of a major disaster.” FEMA does not have authority to deal with the broad economic losses caused by a disaster (U.S. Federal Emergency Management Agency, 2002g, p. 1) and considers unemployment a direct result of a disaster if the unemployment results from

- physical damage or destruction of the place of employment

plausible that at least 50 percent of the increase in unemployment benefits can be attributed to claims from New York City workers.

¹¹ The lower estimate was \$1.6 billion 50 percent (the percent of state unemployment benefits paid to New York City workers) 50 percent (the percent of benefits due to the attack). The upper estimate was \$1.6 billion 50 percent 75 percent.

¹² Unemployment benefits were paid up to 39 weeks in New York. Thus, for unemployment benefits to be paid more than a year after 9/11, the job loss would have to have occurred more than 13 weeks after 9/11.

¹³ The following quick calculation provides another rationale for using the upper end of the range. If 50,000 more workers in New York City were collecting benefits on average per month in the year following 9/11, and weekly benefits averaged \$300, then the total increase in unemployment benefits would be \$780 million. (Average monthly benefits per worker would be \$300 per week 4.33 weeks per month. The annual increase would be \$1,300 per month 50,000 workers receiving benefits each month 12 months = \$780 million for the year.)

- physical inaccessibility of the place of employment due to closure by the federal government
- lack of work or loss of revenues if, prior to the disaster, the affected worker's employer, or a self-employed individual's business, received at least a majority of its revenues or income from an entity that was either damaged or destroyed in the disaster or an entity closed by the federal government in immediate response to the disaster.

After the September 11 attack, the DUA program covered the self-employed and employees who could not work because their place of business was damaged or destroyed, even though they were not formally laid off. The program was available to workers employed by businesses that were one step away from being businesses physically impacted by the disaster, but it excluded those whose unemployment was caused by a long chain of events initiated by the attack or by general economic decline (Lake, 2002). Only those in the presidentially declared disaster area were eligible.¹⁴ Undocumented workers and most immigrants who entered the country after August 1996 were ineligible for DUA benefits (and for most other types of government assistance)¹⁵

The DUA program uses the same methods to calculate weekly benefits as the state's regular unemployment program. DUA assistance is typically available as long as a disaster continues, up to a maximum of 26 weeks. In the case of those who were unemployed due to the September 11 attack, however, Congress passed special legislation to extend the benefits for up to 39 weeks—to the week ending June 16, 2002 (Lake, 2002; New York State Department of Labor, 2002).¹⁶ Disaster unemployment benefits are reduced by workers' compensation and Social Security benefits (Seessel, 2003, p. 29).

Disaster unemployment benefits were paid to only a limited number of people after September 11. As shown in Table 6.1, 3,294 DUA applications were approved, and \$13.2 million was paid through October 2002 (\$4,000 per approved application, a 49 percent approval rate). Presumably, most of those receiving assistance worked in or near the World Trade Center, but we have not been able to review data on this matter. FEMA was criticized for inappropriately denying benefits to some groups. For example, a *New York Times* article reported complaints that FEMA unfairly denied benefits to unemployed artists in Lower Manhattan (Henriques, 2002).

¹⁴ The presidentially declared disaster areas spanned a number of counties in and around New York City.

¹⁵ Restrictions on benefits for immigrants entering the country after August 1996 were established by Title IV of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (U.S. Federal Emergency Management Agency, 2002g, p. 37).

¹⁶ DUA benefits were extended by H.R. 3986 on March 20, 2002 (Lake, 2002).

Mortgage and Rental Assistance. FEMA's Mortgage and Rental Assistance (MRA) program provided substantial assistance to those who were economically affected by the September 11 attack: \$194 million had been disbursed by the program through July 2003, and \$200 million was budgeted (see Table 6.1). The MRA program was little used prior to 9/11, and its use following 9/11 illustrates the degree to which losses from the attack on the WTC differed from those in most disasters. According to the FEMA's inspector general, only \$18.1 million had been awarded in 68 presidentially declared disasters from the inception of the MRA program until September 11 (U.S. Federal Emergency Management Agency, 2002g, p. 9). The MRA program had been little used because "previous disasters did not coincide with nor result in widespread unemployment and national economic loss" (U.S. Federal Emergency Management Agency, 2002g, p. 9).

FEMA's implementation of the MRA program in New York City generated heated controversy. Initially, an applicant had to

- be a U.S. citizen, noncitizen national, or qualified alien
- have suffered at least a 29 percent loss in household income as a direct result of the incident
- provide written proof that he or she was at risk of losing his or her residence via eviction, dispossession, or foreclosure as a direct result of the disaster (U.S. Federal Emergency Management Agency, 2002g, p. 10).

Prior to 9/11, FEMA had not included the word *direct* in the above criteria. As discussed earlier, FEMA does not have authority to deal with broad economic losses, and it wanted to be clear that the MRA program was not available to those who were laid off across the country after the attacks (U.S. Federal Emergency Management Agency, 2002g, p. 11). Initially, FEMA interpreted "direct result" of the disaster to mean that a business for which the applicant worked was physically damaged or made inaccessible by the attack on the WTC.

The eligibility criteria for the MRA program after 9/11 were criticized as being far too narrow. Workers who were affected by the events of 9/11 but who did not work for firms in the WTC area were not eligible. FEMA relaxed some of the requirements early on: The income loss requirement was reduced from 29 percent to 25 percent in November 2001, and in December 2001, a late-payment notice was considered acceptable documentation of intent to foreclose or evict (U.S. Federal Emergency Management Agency, 2002g, pp. 11–12). Even so, only 30 percent of the nearly 11,000 applications submitted through April 2002 were approved, and only \$13 million in benefits were distributed (Henriques, 2002). On June 28, 2002, FEMA broadened the program to include those who

- worked for businesses in Manhattan

- had an “economically dependent business relationship” with a Manhattan firm
- commuted off the island and suffered financially because of the attack (U.S. Federal Emergency Management Agency, 2002e).

Payouts from the program subsequently burgeoned. By August 15, 2002, 52 percent of applications had been approved (including some of those that were initially denied), and payments totaled \$41.5 million (U.S. Federal Emergency Management Agency, 2002c, p. 32). FEMA’s expansion of the program satisfied many, but there was still some dissatisfaction with the need to show a late-payment notice. Several of the people we interviewed thought that this requirement forced people to wait too long to apply for assistance.

Disaster Food Stamps. The disaster food stamp program was another source of assistance to those whose income had been reduced because of the attack on the WTC, although the amounts distributed were relatively small. The FEMA-funded disaster food stamp program distributed \$3.8 million in food stamps to 33,000 individuals through January 9, 2002.

Disaster Relief Medicaid. The Medicaid computer system and eligibility records in New York City were damaged on 9/11, and therefore, standard procedures could not be used to enroll beneficiaries. New York State and City of New York developed the Disaster Relief Medicaid (DRM) program, which only required that an applicant’s income fall below a certain amount. The program used the income cut-offs of the Medicaid Family Health Plus program, which was scheduled to be implemented in fall 2001. The Family Health Plus cutoffs were higher than those of the traditional Medicaid program, and, like the Family Health Plus program, the Disaster Medicaid program did not require the value of a household’s assets (homes, savings, cars) to fall below a specified level—i.e., there was no “asset test” (Perry, 2002, p. 1). The DRM program required a simplified one-page application, which allowed applicants to attest to basic information instead of requiring them to provide documentation, and it offered same-day approval (Benjamin et al., n.d.). The program was open for enrollment through January 31, 2002, and DRM enrollees received four months of coverage (which could extend past January 31, 2002). At the end of four months, enrollees were able to apply to the standard Medicaid or Family Health Plus programs.

Projected Disaster Relief Medicaid Benefits. It is difficult to estimate how much the DRM program increased Medicaid expenditures above what they would have been otherwise. The Family Health Plus program was delayed because of 9/11 (Perry, 2002, p. 1), and, thus, Medicaid expenditures would have been higher at the end of 2001 and the beginning of 2002 than a year earlier had the attack on the WTC not occurred because the new program would have been implemented. The New York State Department of Health estimated that 600,000 people would be eligible for Family Health Plus statewide after it is fully implemented (Perry, 2002,

p. 1). Approximately two-thirds of Medicaid enrollees in New York State live in New York City (New York State Department of Health, n.d.), implying that Medicaid enrollment was expected to increase roughly 400,000 in New York City over time (absent the attack). Actual Medicaid enrollment rose 388,000 in New York City from September 2001 to February 2002. The 388,000 figure is the enrollment figure for February 2002 minus the enrollment figure for September 2001; thus, it roughly represents increases over the period during which people could apply to the DRM program. Expenditures during October 2001 through February 2002 were \$803 million higher than the same period a year earlier (\$7.305 billion versus \$6.502 billion). This entire increase might have occurred absent the attack on the WTC, but focus groups of DRM enrollees found that many enrollees had lost their jobs because of the attacks and the poor economy that followed (Perry, 2002, p. 5).¹⁷ It also seems unlikely that the expected enrollment increase in the Family Health Plus program would have occurred so rapidly absent the attack.

To provide a very rough estimate of the increase in Medicaid expenditures due to the events of 9/11, we assume that one-quarter of the 388,000 enrollment increase was due to the attack (based on focus-group results) and that the average expenditures per enrollee during the four months of enrollment equaled average expenditures per Medicaid beneficiary over four months. The resulting estimate of total DRM program expenditures is approximately \$27 million.¹⁸

Training Programs and Employment Services. Job training is not part of standard disaster response. The bottom four rows of Table 6.1 provide examples of government training and employment services programs funded by the federal, state, and local governments. Through these programs, more than \$55 million was provided to fund job training, placement services, and career counseling. We have not been able to develop a full accounting of the amount spent by government on training programs and employment services for those who lost their jobs or were economically affected by 9/11, but it probably exceeded \$70 million.

Charity

Charities made substantial payments to workers affected by 9/11, frequently targeting groups missed by government programs. The September 11th Fund, for example,

¹⁷ On average, there were nine enrollees per focus groups, and according to Perry (2002, p. 5), “in every focus group a number of participants indicated that they had lost their jobs because of the September 11 attacks and the poor economy that followed.” These results suggest that at least one-quarter of the enrollees lost their jobs because of the attacks.

¹⁸ Medicaid expenditures in New York City in 2002 were \$29.21 billion for 3,406,965 enrollees, or \$8,573 per enrollee (New York State Department of Health, n.d.). Expenditures over four months thus averaged \$2,858 per enrollee. When the average cost of \$2,858 is multiplied by the 97,000 increase in enrollment (388,000 divided by 4), the total increase in cost due to the attack amounts to \$277 million.

- provided benefits to undocumented workers and others who were ineligible for government unemployment programs (see Table 6.2). Cash assistance from The September 11th Fund totaled roughly \$150 million and averaged about \$4,500 for each of the 35,000 beneficiaries¹⁹
- spent another \$70 million on training and employment programs, including payments of stipends for trainees (Immerman, 2004)
- provided one year of health insurance coverage to workers (and their dependents) who were employed at the time of the attack and lost jobs within four months of the attack. Coverage was provided to approximately 14,500 people at a total cost of approximately \$32 million (Immerman, 2004).

The Red Cross Extended Maintenance Assistance Program provided basic living expenses to workers who lost their jobs or suffered substantially reduced employment after September 11 and prior to January 1, 2002. Basic living expenses were paid for up to three months, and the program ended in April 2002 (Mitchell, 2002b, p. 4). Overall, the Red Cross paid \$221 million to 38,727 beneficiaries (Lowry, 2004).

Both the Red Cross and The September 11th Fund focused on those working south of Canal Street and in Chinatown on 9/11. Many smaller charities addressed the needs of those in the rest of New York City. For example, the Robin Hood Relief Funds Employment program provided assistance to workers in other parts of the city who were laid off or worked reduced hours because of the attack on the WTC (see Table 6.2).

Projected Charity Benefits. The Foundation Center estimated that charities spent \$616 million on individuals and families affected by the events of 9/11, including displaced residents (Renz, Cuccaro, and Marino, 2003, p. 20). As stated in Chapter Five, we estimated that charities distributed \$80 million to residents of Lower Manhattan. We thus estimate that charitable distributions to workers and their families who were economically affected by the attack totaled approximately \$540 million.

¹⁹ The September 11th Fund reported that it paid \$245 million to surviving family members, displaced residents, and workers through September 19, 2002 (The September 11th Fund, 2002c). Approximately \$70 million went to surviving family members (\$20,000 to 3,500 surviving families according to the U.S. General Accounting Office [2002b, p.12]), and, as discussed in Chapter Five, \$12 million to \$30 million went to residents in Lower Manhattan. The remainder, which went to affected workers, is thus \$145 million to \$163 million. According to the U.S. General Accounting Office (2002b, p. 12), 35,000 workers received assistance from The September 11th Fund, implying an average payment of roughly \$4,500 per displaced worker receiving an award.

Table 6.2**Overview of Charity Assistance to Workers in New York City Economically Affected by the September 11 Attack on the World Trade Center**

Source	Eligible Population	Expenditures	Description of Benefits
Red Cross Extended Maintenance Assistance Program	Those working south of Canal Street who lost their jobs, were laid off, or suffered substantially reduced employment prior to January 1, 2002, as a result of the attack (American Red Cross, 2002a, p. 3); deadline for applying was March 8, 2002; all benefits were paid by April 13, 2002	\$221 million paid to 38,727 beneficiaries	Three months of basic living expenses for food, utilities, and housing; assistance based on demonstrated need (American Red Cross, 2002a, Attachment A)
September 11th Fund Cash Assistance Program (administered primarily by Safe Horizon)	Those ineligible for unemployment insurance (usually undocumented workers) or those who applied and were rejected	Approximately \$150 million in cash assistance	Replaced net salary; applicants reapply for benefits every two weeks; total payments limited to \$10,000 per person; counseling and legal advice were available (The September 11th Fund, 2002a, 2002b)
September 11th Fund Training and Employment Programs	Unemployed workers previously working south of Canal Street or in Chinatown	Approximately \$70 million	Training and employment programs, including stipends for trainees
September 11th Fund Health Insurance Program	Workers employed south of Canal Street or in Chinatown that were employed at the time of the attack and lost jobs within four months of the attack	Approximately \$32 million for approximately 14,500 beneficiaries	One year of health insurance
Robin Hood Relief Fund Employment programs	Low-income workers formerly employed by companies located in the WTC; students at the Borough of Manhattan Community College who were unemployed due to 9/11; workers displaced by 9/11	Distributed \$1.5 million to various organizations	Examples of programs funded: job training and job placement; living expenses while finishing classes at the Borough of Manhattan Community College
Robin Hood Foundation Lower-Income Victims' Services and Relief (administered by Safe Horizon, Food Bank for New York City)	Funding for soup kitchens and food pantries in New York City; see the description of the September 11th Fund Cash Assistance program	\$1.2 million for Food Bank of New York City; \$7.6 million for Safe Horizon assistance programs	Meals and food; see the description of the September 11th Fund Cash Assistance program

Summary of Benefits for New York City Workers Economically Affected by the Attack

The response of government and charities to the workers financially affected by 9/11 was substantial and multifaceted (see Table 6.3). The standard unemployment insurance program absorbed large numbers of displaced workers and paid the most of any program for workers by far. After a slow start, FEMA's Mortgage and Rental Assistance Program paid out a substantial amount. The Disaster Relief Medicaid program also quickly enrolled a large number of people.

Government programs funded the bulk of payments to workers. Charities, however, filled in important gaps. Overall, our figures suggest that charities paid approximately one-third of the roughly \$1.7 billion that went to workers in New York City.

In spring 2002, McKinsey & Company surveyed workers who had applied to major charities for aid as a result of 9/11. Eight-six percent of respondents reported receiving monetary assistance. Respondents who had worked or continued to work south of Canal Street received \$7,800 on average, while respondents who had worked or continued to work north of Canal reported receiving \$5,600 on average (McKinsey & Company, 2002). The McKinsey survey captured benefits through spring 2002, and benefits increased over time as payments by government and charities continued.

Table 6.3
Benefits Provided by the Four Compensation Mechanisms for Workers in New York City Economically Affected by 9/11

Mechanism	Amount ^a (\$millions)
Insurance	Minimal
Tort	Expected to be minimal
Government Programs	
Unemployment benefits (in year following 9/11)	600
Disaster unemployment assistance	10
Mortgage and rental assistance	200
Disaster food stamps	< 5
Disaster relief Medicaid	280
Job training and employment services	70
Total quantified benefits	1,160
Charity	540
Total quantified all mechanisms	1,700

^aDollar amounts (except for disaster food stamps) are rounded to the nearest \$10 million.

Assessment of Benefits for New York City Workers Economically Affected by the Attack

The response of government agencies and charities reflected the realization that pre-existing programs were not well tailored to a disaster with broad employment effects. FEMA usually focuses on economic loss associated with the damage or destruction of property, and FEMA's programs for responding to broader economic impacts are limited. After a great deal of criticism and prodding from stakeholders in New York City, FEMA responded to the employment effects of 9/11 by substantially broadening the Mortgage and Rental Assistance program. The federal government also made substantial amounts of money available for job training and employment services, services not typically provided after disasters. The charities channeled a great deal of money to those who were economically affected by the World Trade Center attack, particularly those who were ineligible for government programs.

Equity Issues

From a corrective justice perspective, benefits for workers affected by the attack on the World Trade Center fell short of their economic losses. The structure of unemployment benefits is an important part of the explanation for this outcome. First, unemployment programs do not help those whose hours are reduced, only those who are laid off. As discussed above, the Fiscal Policy Institute estimated that roughly as many workers were forced to work fewer hours by the WTC attack as were laid off. Second, weekly unemployment benefits are capped, which means that unemployment benefits replaced only a small percentage of the income lost by high-wage workers. Consequently, some of those we interviewed thought that high-wage workers who were unemployed or underemployed due the attack on the World Trade Center were among the most adversely affected by the attack, even after taking government and charitable programs into account. Finally, unemployment benefits provide critical assistance while they last, but they do not last forever. The McKinsey study (McKinsey & Company, 2002) suggested that a large number of people were not able to find jobs by the time unemployment benefits ran out. The manager of one of the large charities we interviewed in fall 2002 was concerned about what happened when unemployment benefits ran out. He suspected that there was a significant increase in income losses six to nine months after 9/11.

Immigrant workers, and undocumented workers in particular, were a source of concern among those we interviewed. Many interviewees believed income losses were particularly significant for undocumented workers because

- language barriers and fear of the government sometimes prevented even documented immigrants from seeking assistance

- immigrant workers were often in low-paying jobs and even small reductions in income caused significant hardship
- most government assistance programs were not available to undocumented workers.

The charities filled some of the gaps left by government programs. They provided assistance to undocumented workers and were able to reach immigrant workers who shied away from government agencies. Even with the charitable response, however, the sense among many of those interviewed was that the unmet needs of immigrant workers affected by the events of 9/11 were still substantial.

Data on benefits and losses provide evidence of the shortcomings of the response for workers if the goal is full corrective justice. In its spring 2002 survey, McKinsey found that most workers who were unemployed or underemployed due to the attack on the WTC had received some assistance, but not enough to make up for income losses. It found that income dropped 30 percent on average, after taking into account government and charitable assistance. The Federal Reserve estimated that the September 11 WTC attack caused wage and salary earnings in New York City to decline between \$3.6 and \$6.4 billion during the first nine months after 9/11. Our \$1.7 billion estimate for benefits represents less than half this decline, and our estimate included benefits paid more than nine months after 9/11.

When held up to a standard of full compensation, the benefits available to workers affected by the events of 9/11 clearly came up short. But, the social welfare system in the United States has not historically attempted to fully compensate workers affected by economic downturns or other adverse events. This outcome is by design—partly due to budget limitations and partly due to concerns that full compensation for job loss will reduce incentives to find work.

The benefits provided to workers also raised questions over distributional fairness. Questions arose over the distribution of benefits across victim groups. Interviewees across a broad spectrum of stakeholder groups thought that workers were among the least well compensated of the victim groups. McKinsey found that the unmet needs of workers were far larger than for families of the deceased or residents. The dissatisfaction of many with the benefits available to workers was caused in part by raised expectations for assistance after 9/11. While the partial compensation might be grudgingly accepted in normal circumstances, dissatisfaction with the partial compensation was greater after 9/11. Workers heard about the \$20 billion in federal aid that was earmarked for New York City and saw that the VCF was going to compensate surviving family members for full economic loss (in most cases) and some noneconomic losses. Many of those we interviewed, particularly those representing charities, pointed out that expectations for assistance shifted to full compensation for economic loss and that beneficiaries were less satisfied with the usual charitable goal of providing assistance that would enable them to get back on their feet.

Questions also arose over the distribution of benefits among workers. In the course of our interviews, dissatisfaction was expressed with the distinction between workers “directly” and “indirectly” affected by the attack on the WTC. The largest charities tended to focus their assistance on workers in the World Trade Center or south of Canal, and many government programs initially focused on workers in or near the World Trade Center.²⁰ For example, eligibility requirements for FEMA’s MRA program were quite narrowly defined for many months, and the Disaster Unemployment Assistance program excluded layoffs not closely linked to the events of 9/11. The result was that benefits to displaced workers who worked near the WTC were often more generous than the benefits to those who worked farther away from Ground Zero. Narrowly restricting benefits reduced the chance of providing benefits to workers who were laid off for reasons other than the attack. However, it also meant that workers who were affected by a long chain of economic reactions from the attack were less well compensated. As an interviewee who represented lower-income and immigrant workers pointed out, the drop in income was just as painful to a worker who was indirectly laid off as to one who was directly laid off.

Efficiency Issues

Benefit providers had problems in communicating with workers who had lost their jobs and coordinating efforts among themselves. The GAO found that those who lost jobs were confused about what aid was available and concluded that a single source of information and referrals for emergency assistance, job placement, and job training would have been helpful (U.S. General Accounting Office, 2002b, p. 16). The GAO also found that there was little information-sharing among charities, particularly during the first several weeks after the disaster and that coordination among charities and the government could have been enhanced (U.S. General Accounting Office, 2002b, p. 16; U.S. General Accounting Office, 2003b, p. 47).²¹ These themes were echoed in our interviews. Again, the costs of increased coordination must be compared with its benefits before it can be recommended.

In terms of maximizing overall social well-being, the main efficiency issue is whether and how quickly idle resources (in this case labor) are put back to work. Job training and joblocator services can contribute to putting idle resources back to work, but the costs of the programs need to be compared with their benefits to determine whether those programs are economically efficient. Incentives for business, which in turn can increase employment, are discussed in the next chapter. The most important aspect of the compensation system for workers in terms of efficiency is that workers maintain strong incentives to get back to work as quickly as possible.

²⁰ Unemployment benefits, which apply without regard to employment location, are an important exception.

²¹ For example, the GAO noted that both charities and FEMA provided rental assistance.

Full compensation works against such incentives, illustrating some of the tradeoffs between equity and efficiency considerations that should be considered in designing compensation systems for possible future terrorist events.

Benefits for New York City Businesses Affected by the Attack on the World Trade Center

In the previous chapters, we addressed 9/11-related assistance and compensation for individuals. In this chapter, we turn to compensation and assistance programs for businesses in New York City that were affected by the attack on the World Trade Center. Businesses in New York City suffered property damage as well as declines in revenues and profits.

We examine the programs that were available to both large and small firms, paying particular attention to small firms. Small firms usually have a less-diversified customer base and are less well capitalized than larger firms and, thus, are more likely to suffer business disruptions after a catastrophic event.

Overview of Losses

The September 11 attack had a significant impact on businesses in Lower Manhattan and New York City more generally. The U.S. General Accounting Office (now the Government Accountability Office) estimated that 1,025 businesses employing more than 75,000 people were displaced due to damage around the World Trade Center, and 18,000 businesses in New York City employing 563,000 people were disrupted or forced to relocate (U.S. General Accounting Office, 2003b, pp. 49, 79).¹

Property damage suffered by businesses from the attack on the WTC was enormous. The book value of the World Trade Center structure itself was \$3.5 billion. The estimated cost of repairing the surrounding buildings was \$4.5 billion, and the contents inside the World Trade Center alone were worth \$5.2 billion (Bram, Orr, and Rapaport, 2002, p. 12). The estimated cost of repairing the communication and power infrastructure was \$2.3 billion—losses suffered by large firms such as Con Edison and Verizon. All told, estimates of property damage to businesses in Lower Manhattan total nearly \$16 billion.

¹ To put this number in perspective, there were 206,601 firms in the New York metropolitan statistical area in 1999 according to the U.S. Census Bureau (1999).

In addition to property damage, firms in Lower Manhattan suffered other economic losses. They lost business due to street closures, power interruptions, and a decline in the number of people living and working in Lower Manhattan. They also incurred additional costs of moving, reconstructing destroyed records, and increased security. Firms lost valuable employees in the attack and likely saw reduced worker productivity due to emotional distress. According to the New York City Partnership and Chamber of Commerce, revenue losses totaled \$795 million at 3,400 inaccessible small firms in the immediate vicinity of the World Trade Center during the 45 days following the attacks (Seessel, 2003, p. 17).

Retail businesses in Lower Manhattan were hard hit. A January 2002 survey of 861 retail businesses south of Chambers Street and in Tribeca by the Alliance for Downtown New York found that businesses were closed for an average of eight days after 9/11, with average weekly sales losses of \$25,000 (Alliance for Downtown New York, 2002a). Nearly 25 percent of the businesses surveyed remained closed through mid-October. A second Alliance for Downtown New York survey, in summer 2002, of 208 retail businesses south of Chambers Street found that 90 percent of the respondents reported lower revenues during the nine months after September 11, with an average decline in revenues of 42 percent (Alliance for Downtown New York, 2002b, p. 8).

The second Alliance survey found that the greatest challenge facing retailers south of Chambers Street was lack of customers. The biggest drop was in business customers (customers that were businesses or their employees), but the reduction in residential customers was also substantial (Alliance for Downtown New York, 2002b, p. 2). Residential vacancy rates rose from roughly 5 percent before the 9/11 attack to 45 percent by the end of 2001 (New York City Partnership, 2002, p. 10). Little overall change in the number of tourist customers was reported. Rents fell 10 to 15 percent south of Chambers Street and owner-occupied housing prices saw a similar decline between September 11 and January 2002 (Lower Manhattan Development Corporation, 2002a, p. 6).

A year after the disaster, the situation appeared to have improved for retail businesses in Lower Manhattan. Residential vacancy rates in the buildings surrounding the World Trade Center site had almost returned to pre-9/11 levels (New York City Partnership, 2002, p. 10), and the area south of Chambers Street regained approximately 60 percent of the jobs lost after September 11 (Alliance for Downtown New York, 2002b, p. 3).²

Mirroring the preponderance of small businesses in the overall economy, the majority of businesses affected by the September 11 attack were small businesses. Ac-

² Of the 50 companies that occupied the most space in and around the World Trade Center prior to September 11 and were dislocated, 54 percent had moved back to Lower Manhattan by September 30, 2002 (New York City Partnership, 2002, p. 2).

cording to a report prepared by the New York State Assembly Ways and Means Committee, 97 percent of the business establishments below 14th Street before September 11 had 100 or fewer employees, and 86 percent had fewer than 20 employees (New York State Assembly Ways and Means Committee, 2002, p. 43).³ KPMG, a consulting firm working for the New York City Partnership, put the number of small businesses in the WTC complex at 707 and estimated that 4,400 small businesses (defined as firms with fewer than 100 employees) were located in the immediate vicinity of the WTC (New York City Partnership, 2001, p. 62). The number of small firms in the immediate vicinity of the WTC is a substantial portion of the 15,000 to 20,000 small businesses located south of Canal Street.^{4, 5}

Small businesses in New York City were likely to be less well equipped to weather the September 11 attack than larger firms. Large businesses generally have a more geographically diverse customer base and thus likely experienced smaller percentage declines in revenue after 9/11 than smaller firms that are dependent on foot traffic or local business clients. Smaller firms are generally less well capitalized than larger firms and thus usually have fewer resources to weather a temporary downturn in revenue. During our interviews, we were told that the major problem for large businesses that were in the World Trade Center was finding new office space so they could get their operations running again. For many small firms, there was a more fundamental question: Would there be a demand for their products or services and, if so, when?

Source of Benefits

This section describes the benefits that businesses located in New York City received from the four major funding mechanisms that also supplied benefits to individuals—insurance, government programs, the tort system, and charity.

³ According to the Census Bureau, 97 percent of firms in the New York Metropolitan statistical area had fewer than 100 employees and account for 36 percent of the employees (U.S. Census Bureau, 2003).

⁴ See Map in Appendix D.

⁵ KPMG reported that businesses with fewer than 100 employees employ 109,000 people below Chambers Street and that in New York City as a whole 290,000 small businesses employ 1.9 million workers (New York City Partnership, 2002, pp. 59, 61). Distributing small businesses by the number of employees implies that there were roughly 16,500 small businesses south of Chambers. Based on Seedco data, Seessel (2002a, p. 14) estimated that there are 14,000 small businesses in Lower Manhattan, employing a total of 370,000. However, he did not define Lower Manhattan, and it appears that he was using a cutoff of 500 employees to define small business (although a high percentage of business with fewer than 500 employees have fewer than 100 employees).

Insurance

Overall Payments. The insurance industry made substantial payments to businesses as a result of the September 11 attacks. The Insurance Services Office reports that 15,200 commercial claims (15,000 in New York and 200 in Virginia from the attack on the Pentagon) had been filed through August 2002 (reported in Hartwig, 2003, p. 3). The second column of Table 7.1 reports estimates of insurer losses (i.e., the cost to insurers) on commercial policies based on a study by the Insurance Information Institute (Hartwig, 2004a, p. 6).^{6, 7} These estimates included the cost of processing claims as well as payments to insureds. The third column of the table provides estimates of the payments to insureds after claims adjustment costs are removed.⁸ Excluding payments on liability policies (which are discussed in the next subsection) and payments for the loss of the four aircraft destroyed in the attacks, insurance payments to businesses in New York City to cover losses related to the attack on the WTC are expected to total roughly \$17.0 billion.⁹ Approximately \$7.5 billion of the payments are expected to be for property damage and the remaining \$9.5 billion for business interruption and event cancellation. The payments for business property damage are less than half of the \$16 billion in estimated actual business property damage in New York City due to the attacks.

Table 7.1
Insurer Costs and Payments for Business Losses

Type of Business Loss	Costs to Insurers (\$billions)	Payments to Insureds (\$billions)
World Trade Center structures	3.60	2.99
Other commercial property damage	5.40	4.48
Business interruption	10.50	8.72
Event cancellation	0.95	0.79
Total	20.45	16.98

NOTE: These numbers exclude payments on liability policies and payments for the destruction of the four aircraft destroyed in the attacks.

⁶ The Insurance Information Institute reported that insured losses for property damage excluding the World Trade Center structures (but not contents) and the four aircraft would amount to \$6 billion. As discussed in Section 5.2, payments on personal policies (auto and homeowner) were expected to range between \$600 million to \$700 million range, implying that insured losses for businesses amounted to \$5.3 to \$5.4 billion.

⁷ The estimates in Hartwig (2004a) are for all insurer losses, whether in New York City or not. We assume that all the commercial property damage claims are in New York City. Hartwig (2004b) estimates that upwards of 95 percent of business interruption and event cancellation payouts will be in New York City, so we reduce his estimates of overall insurer losses by 5 percent to approximate losses in New York City.

⁸ Loss-adjustment expenses on commercial lines of insurance averaged about 17 percent of the combined indemnity payments and loss-adjustment expenses. Thus, the amount received by insureds would be roughly 83 percent of total insurer costs (A. M. Best Company, 2002).

⁹ Insured losses for the four aircraft are expected to total \$500 million.

While the payout on business interruption insurance was very large, this type of payout was not available to all insured firms affected by the World Trade Center attack. Business interruption insurance generally required that the loss of business be due to some physical disruption. Firms whose operations were disrupted because of property damage or government-ordered street closures due to the attacks were eligible. However, firms outside Lower Manhattan that sent employees home on September 11 or saw demands for their products or services decline were not eligible in most cases to recover foregone revenues.

Incidence of Insurance. A sizable number of retail businesses in Lower Manhattan carried insurance. According to the summer 2002 Alliance for Downtown New York survey, between 67 percent and 75 percent of retail establishments south of Chambers Street carried insurance that at least partially covered losses from the September 11 attack. Sixty-seven percent had business interruption insurance in place on September 11, nearly 79 percent had property damage insurance, and 58 percent had insurance for damage to equipment and machines (Alliance for Downtown New York, 2002b, p. 13).¹⁰ Data on the incidence of insurance by firm size in New York City are not readily available. Representatives of nonprofits serving small businesses who were interviewed, however, thought that small businesses generally did not carry nearly enough business interruption coverage.

Claiming Experience. A substantial number of retailers with insurance in Lower Manhattan received some payment due to the losses caused by the September 11 attack. According to the summer 2002 Alliance survey, 85 percent of retail establishments south of Chambers Street with insurance filed an insurance claim. Of those filing claims, 84 percent received some payment (Alliance for Downtown New York, 2002b, p. 13). The survey results suggest that between 45 percent and 55 percent of the retail establishments south of Chambers Street received insurance payments.¹¹ The Alliance surveys (2002a, 2002b) suggest, however, that the resolution of insurance claims was often slow. Four months after the attacks, between 50 percent and 60 percent of claims were still being processed (Alliance for Downtown New York, 2002a, p. 7). When asked about their insurance settlements, only 55 percent of those receiving a payment were satisfied with their settlement (Alliance for Downtown New York, 2002b, p. 13). Some businesses also complained that by opening as soon

¹⁰ The earlier Alliance survey (in January 2002) found somewhat lower, but still sizeable, insurance rates among retail establishments. Of the 40 percent of survey respondents willing to answer questions on insurance, 53 percent had business interruption insurance, 54 percent had property damage insurance, 21 percent had insurance for equipment damage, and 73 percent had a "general" insurance policy (Alliance for Downtown New York, 2002a, p. 7).

¹¹ The percent of retailers receiving payments is the percent with insurance times the percent with insurance that filed times the percent that filed that received payment. We calculate the lower end of the range as follows: 65% 85% 84% = 46%. The calculation for the upper end of the range is: 75% 85% 84% = 54%.

as possible after September 11, they disqualified themselves from receiving business interruption insurance (Alliance for Downtown New York, 2002a, p. 9). According to the representatives of small businesses that we interviewed, there were frequent disputes over whether business interruption policies covered declines in revenue after the attacks.

Tort

The tort system so far has not been a source of compensation for businesses in Lower Manhattan. According to representatives of organizations serving small businesses that we interviewed in New York City, small businesses considered suing the City of New York for losses due to prolonged street closures. However, individuals we interviewed in the New York City Law Department in fall 2002 said that they had received no such claims and that a recent court ruling (in a case unrelated to the September 11 attack) found that the City of New York could not be held liable for business interruption losses due to street closures.

Just before the expiration of the three-year statute of limitations on federal cases related to 9/11, several suits were filed by businesses. Cantor Fitzgerald filed a \$600 million suit against the Saudi government, Saudi royal family, and al Qaeda to recover uninsured property damage and lost profit (Campanile, 2004). The leaseholder of the World Trade Center, Larry Silverstein, filed suit against the Saudis, as did the Port Authority of New York and New Jersey (Simpson, 2004).¹²

The Insurance Information Institute believes that substantial payments under liability policies related to the September 11 attacks are possible (Hartwig, 2002; Hartwig, 2004a). The Institute's findings on these potential liability payments focus on claims by individuals who were killed or injured in the 9/11 attacks, but there is no mention in the report of potential claims by businesses. It will likely be many years before the extent of tort litigation related to September 11 and the amounts paid by insurance liability policies or the Saudi royal family or government become clear. We do not believe there is adequate information to estimate the compensation that New York City businesses might recover through the tort system; therefore, we do not include such potential payments in our summary of benefits for businesses.

Government Programs

After most natural disasters, such as a flood, the primary source of government assistance to business is low-interest loans to small businesses. Benefits available to businesses after September 11 were substantially expanded and included grants, tax bene-

¹² Several insurers of the World Trade Center also filed suit in September 2004 against American Airlines and United Airlines, alleging that the airlines' negligence allowed the hijackings. London's QBE International Insurance and some underwriters of Lloyd's of London seek more than \$300 million from each airline ("Trade Center Insurers Sue Two Airlines, 2004).

fits, and services in addition to low-interest loans. Benefits included both compensation for losses due to the attacks and incentives to remain in or move to Lower Manhattan. Programs varied according to the size of the business. We first describe programs that were made available to small businesses and then turn to those for larger businesses.

Subsidized Loans for Small Businesses. As shown in Part A of Table 7.2, the U.S. Small Business Administration (SBA) provided low-interest loans to small businesses nationwide.¹³ Small businesses (as well as large businesses) were eligible for loans up to \$10 million to cover property damage caused by the events of 9/11 and for an additional \$10 million to refinance mortgages and liens on equipment.¹⁴ Small businesses were also eligible for loans to cover necessary operating expenses caused by reduced business resulting from the attacks. These Economic Injury Disaster Loans (EIDLs) were available to firms directly impacted by the attacks, firms in airports or other facilities that were closed by the federal government, and firms that were dependent on a business affected by the attacks. Firms in all parts of the country met these eligibility requirements. Businesses owned by undocumented immigrants were not eligible.

Although the overall amount of property damage loans (\$33 million) was relatively modest, close to \$900 million in EIDL loans were approved nationwide through September 2002. About half of the loans were to businesses in New York State and half to businesses across the rest of the country. The SBA approved 4,381 loans and disbursed \$346 million through September 2002 in the broadly defined disaster area.¹⁵ For businesses in Lower Manhattan, 2,486 loans were approved, and \$154 million was disbursed (see Table 7.2). We assume that \$300 million was disbursed to businesses in New York City.

Because low-interest SBA loans are subsidized, these loans cost the government and taxpayers money. Congress made a special appropriation of \$175 million to the SBA to cover approximately \$651 million in loans. The cost to taxpayers for the low-interest loans was thus expected to be 27 cents per dollar loaned. The cost of the \$300 million disbursed in New York City for economic injury loans and the \$33 million for physical loss loans is expected to approximate \$90 million.

Low-interest loans were also available from New York State's Empire State Development Corporation (ESDC) and the New York City Economic Development

¹³ The SBA generally defines small businesses as firms in most manufacturing and mining industries with 500 or fewer employees and firms in nonmanufacturing industries with \$6 million or less in average annual revenue (U.S. General Accounting Office, 2002a, p. 18).

¹⁴ Prior to September 11, the loan limits were \$1.5 million for each.

¹⁵ The disaster area included 21 New York counties, six counties in New Jersey, two counties in Connecticut, two in Pennsylvania, and one county in Massachusetts (U.S. General Accounting Office, 2002a, p. 17).

Table 7.2
Overview of Government Benefits for Small Businesses in New York City

Source	Eligible Population	Expenditures	Description of Benefits
A. Subsidized Loans			
SBA Physical Loss Disaster Loans	All businesses (large and small) nationwide were eligible starting in October 2001 when the president declared the entire United States a disaster zone; at least partial collateral required for loans over \$10,000; deadline for application was January 31, 2003	531 loans for \$33 million disbursed in New York State through September 5, 2002 (includes loans to some large businesses)	Low-interest loans to repair or replace disaster damage to property, including real estate, machinery, equipment and inventories; loan limit initially \$1.5 million, increased to \$10 million in July 2002; applicant could also borrow additional amounts up to the value of the physical loss or \$10 million to refinance mortgages or liens on equipment (U.S. Small Business Administration, 2002a, 2002b)
SBA Economic Injury Disaster Loans	Small firms nationwide that were (1) in an airport or other facility closed by federal government; (2) supplied or serviced a business or industry adversely affected by attacks or federal action; (3) dependent on a business (e.g., for parts) that was disrupted by attacks or federal actions; (4) directly impacted by destruction from attack and unable to cover ordinary operating expenses; application deadline was January 31, 2003	4,381 loans for \$346 million disbursed in disaster area; 2,486 loans approved and \$154 million disbursed in Lower Manhattan through September 2002; loan approval rate was 54 percent (U.S. General Accounting Office, 2002a, pp. 17, 18)	Low-interest loans to cover wages, debt payments, and other ordinary and necessary operating expenses; no interest and no payments during first two years; loan limit initially \$1.5 million, but increased to \$10 million in July 2002 (U.S. Small Business Administration, 2002a, 2002b, 2002c; U.S. Federal Emergency Management Agency, 2002g)
SBA Supplemental Terrorist Activity Relief (STAR) program	Available to any business (large or small) nationwide that was adversely affected by events of 9/11; application deadline was January 31, 2003	\$75 million to support STAR loans, could support \$4.5 billion in loans; relatively little interest in these loans reported (Seessel, 2003, p. 22)	Reduces cost of 7(a) loans—the nondisaster loans available to small businesses—by lowering lender fees from 50 to 25 basis points (U.S. Small Business Administration, 2002d)

Table 7.2—Continued

Source	Eligible Population	Expenditures	Description of Benefits
Empire State Development Corporation (ESDC) and New York City Economic Development Corporation (NYCEDC) Bridge Loan Program (funded by U.S. Department of Housing and Urban Development [HUD])	New York City-based small businesses and nonprofits that apply for SBA physical loss or economic injury loans; application deadline January 31, 2003	As of June 30, 2003, loss reserve totaled \$7 million to support \$33 million in loans; though September 2002 distributed \$32 million to 950 businesses (U.S. General Accounting Office, 2002a, p. 15)	Bridge loans to small businesses waiting for SBA loan approval (Empire State Development Corporation, 2002a, p. 7)
WTC Business Recovery Loan Fund (administered by ESDC and New York City EDC; funded by HUD)	Small businesses and nonprofits that did not meet SBA credit or eligibility criteria; must have been located south of 14th Street on 9/11 and either remained in business in New York City or resumed business in New York City, or 10 percent of revenues before 9/11 were from sales to businesses located below 14th Street or had opened a new operation south of 14th Street after 9/11	As of June 30, 2003, disbursed \$12 million to participating lender who closed 201 loans; \$41 million budgeted (U.S. General Accounting Office, 2003b, p. 50)	Low-interest working capital loans up to \$250,000; program started in May 2002; repaid loans will remain in community to fund ongoing loan programs (Empire State Development Corporation, 2002a, 2002b)
B. Grants			
WTC Business Recovery Grant Program (administered by ESDC; funded by HUD)	Firms and nonprofits with fewer than 500 employees and operations south of 14 th Street or planning to resume operations there; business must pay back benefits if it did not resume operations within a year of receiving grant or if it relocated a substantial proportion of its business outside New York City within three years of application; application deadline December 31, 2004	\$475 million disbursed to small businesses through June 30, 2003 (U.S. General Accounting Office, 2003b, p. 53); 8,500 businesses received \$236 million through August 2002 (Empire State Development Corporation, 2002b); ESDC expected to make 19,600 awards (Lower Manhattan Development Corporation, 2002b, p.5)	Lost revenue, wages paid for no work, damage to equipment, cleanup costs. Days of loss covered varied from three to 25 depending on proximity to WTC, and maximum payments varied from \$50,000 to \$300,000; insurance payments and assistance from federal programs are deducted; payments from charities, FEMA, not deducted (Empire State Development Corporation, 2002b)

Table 7.2—Continued

Source	Eligible Population	Expenditures	Description of Benefits
WTC Small Firm Attraction and Retention Grant Program (funded by HUD)	Businesses and nonprofits that employed 200 or fewer employees at establishments south of Canal Street (could employ more worldwide); prior to May 2002 must have had ten or more employees, no minimum after May 2002; lease must expire before December 2004 and must sign new lease for five years or more; lease required only through September 2006 south of Chambers; application deadline April 2005	\$155 million budget (Lower Manhattan Development Corporation, 2002b, p. 7); 951 businesses received \$31 million through 6/03 (U.S. General Accounting Office, 2003b, p. 80)	\$5,000 per employee in area south of Chambers Street and west of Broadway; \$3,500 per employee in remaining area south of Canal Street; \$700,000 maximum per establishment
Grants for businesses with disproportionate loss of workforce (administered by ESDC, funded by HUD)	Firms in the WTC or immediate surrounding area that (1) lost at least six permanent employees representing at least 20 percent of the firm's workforce or 50 percent of the workforce in New York City; firms must maintain agreed-upon level of employment in New York City for three years; available to small and large businesses	\$33 million budget, but no funds requested, obligated, or disbursed through June 30, 2003 (U.S. General Accounting Office, 2003b, p. 54)	All funds to be divided among eligible firms based on the magnitude and proportion of employees lost
Employee Training Assistance Program (administered by ESDC and NYCEDC; funded by HUD)	Small businesses and nonprofits that employed 500 or fewer employees worldwide; for training of employees located south of 14th Street with additional benefits for employees south of Houston Street (priority area)	\$10 million budget; no applications through September 2002 (Lower Manhattan Development Corporation, 2002c, p. 7)	Cash grant up to 50 percent of total training costs; up to \$3,500 per employee and \$4,000 per employee in priority area; maximum grant per business is \$100,000 and \$125,000 in priority area (Lower Manhattan Development Corporation, 2002a, p. 14; Empire State Development Corporation, 2002c)
New York City Lower Manhattan Business Retention Grant Program (established by City of New York and State of New York)	Nonretail businesses south of Houston Street with 50 or fewer employees; required to apply for an SBA loan; program began November 2001 and ended March 2002	\$10 million paid to 1,674 nonretail businesses (U.S. General Accounting Office, 2002b, p. 20)	Up to \$2,500 upon completing a loan application and up to \$7,500 upon loan approval

Table 7.2—Continued

Source	Eligible Population	Expenditures	Description of Benefits
WTC Retail Recovery Grant Program (funded by New York state)	Retail and personal service firms with fewer than 500 employees south of Houston Street; firms must continue to operate in New York City; program began November 2001 and ended December 2001	\$14 million paid to 3,048 retail businesses in Lower Manhattan (U.S. General Accounting Office, 2002a, p. 20)	Compensation equal to three days of lost revenue, capped at \$10,000
C. Tax Benefits			
Tax Free Days (New York City and New York State)	Businesses in Lower Manhattan	Unknown	Three days free of sales tax
Liberty Zone Tax Benefits (Internal Revenue Service [IRS] tax benefits)	For the tax credit, businesses with fewer than 200 employees that move into the area south of Canal Street in 2002 or 2003; other benefits apply to all businesses south of Canal Street	Tax credit expected to cost taxpayers \$631 million; accelerated depreciation expected to cost \$2.6 billion (City of New York, Office of the Comptroller, 2002, p. 47)	Tax credit of \$2,400 per employee in 2002 and 2003; additional 30 percent first-year depreciation on property rehabilitated or replaced; five-year recovery period for depreciation of leasehold improvements; and other benefits (Empire State Development Corporation, 2002d)
Liberty Bonds (IRS tax benefits)	Private-sector residential or commercial projects in Lower Manhattan; up to \$2 billion of the \$8 billion in bonds can be used outside Lower Manhattan (Wyatt et al., 2002); available to small and large businesses	\$876 million in bonds issued through May 2003 (U.S. General Accounting Office, 2003b, p. 100); taxes avoided valued at \$1.2 billion (City of New York, Office of the Comptroller, 2002, p. 47)	Up to \$8 billion in tax-exempt private-activity bonds (Empire State Development Corporation, 2002e)
D. Services			
Technical Assistance Services Grant Program (administered by ESDC and NYCEDC; funded by HUD)	Small businesses in Lower Manhattan employing fewer than 200 employees that have been affected by the attacks	\$5 million overall budget; as of July 2003, 23 service providers were under contract and \$2 million was dispersed to 3,000 firms (U.S. General Accounting Office, 2003b, p. 56)	Grants to community-based organizations of up to \$250,000 that provided services in areas such as strategic planning, marketing, finance and insurance, law, and business management

Corporation (NYCEDC). One program provided bridge loans for small businesses awaiting approval of their SBA loans. Another program provided loans to businesses that did not meet SBA credit or eligibility requirements.¹⁶ Data on utilization of these programs are not available, but the amounts budgeted for the programs were modest.

SBA started making loans soon after September 11 and distributed money relatively quickly. The first loans were made on September 15, 2001, and the average time from completion of a loan application to loan disbursement was 38 days (U.S. General Accounting Office, 2002a, pp. 17, 19). Criticism of the program focused on the collateral requirements and the high denial rates. Even though the SBA required only partial collateral, applicants were required to put up personal assets, including their homes, as collateral when available. With such a dramatic decline in the number of workers and residents in Lower Manhattan after the attacks, many small businesses viewed the prospects for their businesses as highly uncertain. Many owners were unwilling to risk their personal assets to secure even a low-interest loan.¹⁷ GAO found that 54 percent of applications were denied or withdrawn. Denials were due to lack of repayment ability or unsatisfactory credit, and withdrawals were mainly due to absence of Internal Revenue Service (IRS) records or a failure to furnish required information (Seessel, 2003, p. 23). The small-business representatives we interviewed were critical of the complexity of the application form and the time that it took the SBA to approve applications.

Grants for Small Businesses. There were two major grant programs available to small businesses in Lower Manhattan: the World Trade Center Business Recovery Grant Program (BRGP) and the World Trade Center Small Firm Attraction and Retention Grant Program (SFARGP). Both programs were funded by the U.S. Department of Housing and Urban Development (HUD) and were unprecedented responses to a disaster, natural or otherwise.

The BRGP aimed to provide compensation to firms whose revenues had been affected by the attacks and that did not have private insurance (see Part B of Table 7.2). This was the first time that HUD funds were used to compensate businesses for their losses (U.S. General Accounting Office, 2003b, p. 50).¹⁸ The BRGP covered damage to equipment, cleanup costs, and lost revenue for between three and 25 days (with maximum compensation ranging from \$50,000 to \$300,000) depending on proximity to the World Trade Center. Payments from charities and FEMA were not

¹⁶ The program was available to businesses south of 14th Street on September 11 or to New York City businesses drawing at least 10 percent of revenues from firms south of 14th Street.

¹⁷ While small-business owners may have been reluctant to put up collateral, one of those interviewed also pointed out that loans became much less attractive after the word started to spread that grants would be available.

¹⁸ HUD funds are typically provided to address long-term effects of a disaster, including economic, infrastructure, and housing redevelopment efforts (U.S. General Accounting Office, 2003b, p. 91).

deducted, but receipts from insurance and other federal programs were. The BRGP provided the equivalent of property damage and business interruption insurance to small firms that did not carry insurance at the time of the attacks. The first business recovery grant was made in February 2002 (U.S. General Accounting Office, 2002a, p. 8), and \$475 million was disbursed to small business through June 30, 2003. A total of \$578 million was committed to the program (U.S. General Accounting Office, 2003b, pp. 50, 53).

As illustrated by the amount of funds disbursed and the number of firms that participated, the BRGP was very popular. The main criticism was that the program covered a relatively small percentage of income loss. GAO found that, at the median, grants covered 17 percent of business revenue declines not reimbursed by insurance or other New York City or New York State grants (U.S. General Accounting Office, 2002a, p. 12). The program was also criticized for providing too much support to financial firms and law firms that, though small, were financially sound. The *New York Times* found that \$144 million or 27 percent of \$539 million in grants went to traders who worked on the floors of Lower Manhattan's stock and commodities exchanges, brokerage firms, and investment banks. Another 10 percent went to law firms, some of which employed hundreds of attorneys. Grants to trading and investment firms averaged \$71,000 (Wyatt, 2003). Some of those we interviewed thought that the grants should have gone to businesses that were in more precarious financial situations.

As the name suggests, the goal of the Small Firm Attraction and Retention Grant Program was to encourage small businesses to stay or come to Lower Manhattan. While HUD funds had been used in the past for economic revitalization after a disaster, efforts to attract and retain businesses after a disaster had not been attempted on such a large scale (U.S. General Accounting Office, 2003b, p. 91). Small businesses that signed a new lease south of Canal Street were eligible for up to \$5,000 per employee (\$700,000 maximum) from the program. The program initially applied to firms with ten or more employees and required a five-year commitment. In response to pressure from small businesses, however, the employee requirement was eliminated, and firms south of Chambers Street were required only to commit to leases through September 2006. The first awards were made in June 2002, and 951 businesses had received \$31 million through June 2003. A total of \$155 million was budgeted for the program.

The SFARGP got off to a slow start. The program was criticized because it took too long to set up. Many firms had to make decisions to stay or leave Lower Manhattan before June 2002. One reason more money had not been distributed through June 2002 was that many small businesses had already signed long-term leases in Lower Manhattan and were not eligible (Alliance for Downtown New York, 2002b, p. 12). Business advocates criticized the program for denying benefits to firms that had already made a long-term commitment to Lower Manhattan, putting them at a

disadvantage relative to new businesses that came into the area. The Empire State Development Corporation responded that the program was designed to provide incentives to businesses at risk of leaving, not for those who had already made long-term commitments to the area (U.S. General Accounting Office, 2002a, p. 14).

The bottom two rows of Part B of Table 7.2 describe grant programs funded by New York City and the State of New York. The programs went into effect very soon after the September 11 and months before the federally funded programs described above. They were modest in scale, however. Together they distributed \$24 million.

Tax Benefits for Small Businesses. The main tax benefits that were available to small businesses in Lower Manhattan are listed in Part C of Table 7.2.

New York City and New York State suspended the sales tax in Lower Manhattan for limited periods to help retail establishments. While retailers in Lower Manhattan welcomed these tax holidays, many felt they were too short in duration to make much of a difference in their business picture (Alliance for Downtown New York, 2002b, p. 7). Estimates of the foregone tax revenue were not readily available.

The federal Liberty Zone tax benefit program was signed into law in March 2002 and provided breaks on federal taxes over an 11-year period (2002–2012), with 95 percent of the benefits in the first five years (City of New York, Office of the Comptroller, 2002, p. 47).¹⁹ Never before had Congress passed a geographically targeted tax-benefit package in response to a disaster (U.S. General Accounting Office, 2003b, p. 89). Businesses with fewer than 200 employees that moved south of Canal Street in 2002 or 2003 were eligible for a federal tax credit of \$2,400 per employee. All businesses large and small south of Canal were eligible for accelerated depreciation on the cost of office equipment, new technology, and other property in the first year of ownership. Also, the depreciation of leasehold improvements made to office space, which is currently depreciated over 39 years, was accelerated to five years, lasting through 2006. Taxes on insurance receipts above property replacement costs are also deferred if the proceeds are reinvested in Lower Manhattan (City of New York, Office of the Comptroller, 2002, p. 48).

The Liberty Zone tax package authorized up to \$8 billion in tax-exempt private-activity bonds. These bonds allow New York City or New York State to issue tax-exempt bonds that can be used to fund private commercial or residential projects in Lower Manhattan and, to a certain extent, in New York City outside Lower Manhattan. The bonds must be approved by the mayor of New York City or the governor of New York. The Empire State Development Corporation reported that commercial bond issuers do not expect to fully use the \$6.4 billion set aside for nonresidential projects, although the \$1.6 billion available for residential projects is expected to be fully subscribed (U.S. General Accounting Office, 2003b, p. 78). As

¹⁹ The Liberty Zone tax benefits were created by the Job Creation and Worker Assistance Act of 2002 (PL 107-47).

of May 2003, only \$875 million in Liberty Bonds had been approved for seven projects (U.S. General Accounting Office, 2003b, p. 100). The bonds must be issued by December 31, 2004. It seems likely that these bonds will be used primarily by larger businesses, although projections of the size of firms that would take advantage of the program are unavailable.

Predicted Tax Benefits for Small Businesses. Before the Liberty Zone Tax program was passed, the Joint Committee on Taxation of the United States Congress predicted that the value of the benefits to businesses large and small would total \$4.4 billion.²⁰ GAO concluded, however, that the value was uncertain and likely to remain unknown. The value of the benefits ultimately will depend on a number of factors, such as the usage of Liberty Bonds and the level of economic activity in Lower Manhattan. For example, an economic downturn could reduce the use of depreciation allowances, whereas faster-than-expected economic growth could increase it. To estimate benefits, the Joint Committee on Taxation also used methods that are not standard practice in economics. For example, it did not discount future benefits and did not consider benefits more than ten years into the future.

The breakdown of tax benefits between large and small businesses is unknown. The benefit of the employee tax credit for small businesses is predicted to be \$631 million, but estimates of how the remaining \$3.8 billion would be split between small and large businesses are not available.

Services for Small Businesses. A number of service and training programs were available to small businesses in Lower Manhattan and in New York City more generally. These types of programs are not usually made available after typical disasters. Part D of Table 7.2 provides an example. The dollars allocated to these programs were not large relative to the other sources of support available to small businesses.

Subsidized Loans for Larger Businesses. Large businesses were eligible for physical-damage loans from the Small Business Administration, but the amounts loaned under this program were small (see Table 7.3). The cost of SBA loans to larger businesses is included in the totals presented in the discussion of subsidized loans for small businesses above.

Grants for Larger Businesses. Two significant grant programs were available to larger firms in New York City, the first funded through FEMA and the second funded through HUD. Investor-owned utilities were eligible for grants to pay for a portion of the costs of rebuilding the communications and energy infrastructure in Lower Manhattan that were not covered by insurance. FEMA programs typically pay to repair publicly owned utility infrastructure damaged in presidentially declared dis-

²⁰ This total does not include the foregone tax revenue for provisions in Job Creation and Worker Assistance Act that allow advance refunding of municipal bonds. After these costs are added in and interactions with the general business tax provisions are considered, the total cost of the tax package was estimated to be \$5 billion (City of New York, Office of the Comptroller, 2002, p. 47).

asters, but damage to investor-owned utility infrastructure usually is not covered. Congress approved \$750 million to repair damage to the private-utility infrastructure in New York City caused by the September 11 attack.²¹ GAO noted that the purpose of this funding was not just to restore the utility infrastructure but also to develop “an improved system to attract new businesses to the area” (U.S. General Accounting Office, 2003b, p. 69).²² These funds meant that New York City utility consumers would not ultimately have to pay for rebuilding the communications and energy infrastructure.

The World Trade Center Job Retention and Creation Program, funded by HUD, was available to firms in New York City that committed to maintaining jobs in New York City for at least seven years. The program paid out \$214 million to 63 firms through January 2003, which amounts to \$3.4 million per company. Payments per job committed came to approximately \$3,300; they were slightly less than the payments per employee to small businesses that renewed their leases in Lower Manhattan (see above). The job commitments did not necessarily need to be in Lower Manhattan, although as of January 2004, more than 90 percent of the 64,610 job commitments were.

The World Trade Center Job Retention and Creation Program was criticized for providing large sums to firms that would have stayed in Manhattan or Lower Manhattan anyway. The first grants went to American Express and the American Stock Exchange, which some observers believe had already decided to stay in Lower Manhattan (Seessel, 2003, p. 21)

Tax Benefits for Large Business. In addition to low-interest loans and grants, large businesses in Lower Manhattan were also eligible for the Liberty Zone tax benefits. Firms south of Canal Street were allowed to more rapidly depreciate property that was rehabilitated or replaced or any leasehold improvements made after the attacks. They were not eligible for the employee tax credit described above that was available to small firms, but they were eligible for the Liberty Bond program.

Loans and Grants to the Airlines. Our discussion in this chapter has focused on assistance to businesses in New York City. However, the substantial grants and loan guarantees made available to airlines were an important part of the federal assistance to business after the attacks. To provide a better sense of the overall assistance to business, we briefly describe these programs. We, however, do not include the value

²¹ The estimated overall cost of repairing the Lower Manhattan telecommunications and energy infrastructure is \$2.3 billion. We have not been able to determine the amount covered by insurance.

²² FEMA provided \$630 million to reimburse New York City for the cost of removing the debris from the World Trade Center site (U.S. General Accounting Office, 2003b, p. 25). We do not include this expenditure in our analysis because the World Trade Center is owned by a public entity. However, one might argue that because the property was under long-term lease to a private party, these expenditures covered costs that would in their absence been borne by the leaser.

Table 7.3
Overview of Direct Government Assistance to Larger Businesses in New York City

Source	Eligible Population	Expenditures	Description of Benefits
A. Subsidized Loans			
SBA Physical Loss Disaster Loans	All businesses (large and small) eligible nationwide starting in October 2001 when the president declared the entire United States a disaster zone; at least partial collateral required for loans over \$10,000	531 loans for \$33 million in New York State through September 5, 2002 (included some large businesses); also loans in rest of country	Low-interest loans to repair or replace disaster damage to property including real estate, machinery, equipment, and inventories; loan limit initially \$1.5 million, increased to \$10 million in July 2002; SBA could increase limit if there was imminent danger of bankruptcy and if there would be major employment impacts; could also borrow additional amounts up to physical loss or \$10 million to refinance mortgages or liens on equipment (U.S. Small Business Administration, 2002a, 2002b)
B. Grants			
LMDC Program for Damaged Infrastructure (federal appropriation from HUD)	Investor-owned utilities (such as Con Edison and Verizon) for damage resulting from 9/11; deadline to apply is December 31, 2007	\$250 million for emergency repair; \$500 million for permanent repairs and rebuilding (U.S. General Accounting Office, 2003b, p. 69)	Costs of restoring private utility infrastructure not covered by insurance or other federal reimbursement
WTC Job Retention and Creation Program (funded by HUD; administered by ESDC)	Businesses south of Canal Street that employed 200 or more employees; New York City businesses that lost business because large numbers of customers were businesses south of Canal; firms that sought to create new jobs south of Canal—firms were required to maintain those jobs in New York City for a minimum of seven years (LMDC, 2002b, p. 7); application deadline is December 2004	Paid out \$251 million to 72 businesses through June 2003 (U.S. General Accounting Office, 2003b, p. 81); program budget \$320 million (Lower Manhattan Development Corporation, 2002b, p.7)	Evaluated case by case based on the value of the project to New York City, risk of firm leaving Manhattan, location, and size of workforce (Empire State Development Corporation, 2002a, pp. 11–12); through January 2003, 64,610 jobs were committed, of which 58,821 were in Lower Manhattan (New York City Economic Development Corporation, 2003); \$3,312 paid per job commitment
Federal Grants to Airlines	U.S. Airlines	\$5 billion	Money allocated across airlines in proportion to market share

Table 7.3—Continued

Source	Eligible Population	Expenditures	Description of Benefits
Compensation for Economic Losses to Other Businesses (funded by HUD; administered by ESDC)	Firms that employed more than 500 employees nationwide and that operated one or more establishments south of 14th Street, each of which employs fewer than 200 people	\$13 million (U.S. General Accounting Office, 2003b, p. 53)	Lost revenue, wages paid for no work, damage to equipment, cleanup costs. Days of loss covered varied from three to 25 depending on proximity to WTC, and maximum payments varied from \$50,000 to \$300,000; insurance payments and assistance from NYECD programs deducted; payments from charities and FEMA not deducted (Empire State Development Corporation, 2002a, p. 10)
Building and streetscape improvements (administered by LMDC)	Businesses in Lower Manhattan	\$4 million committed (U.S. General Accounting Office, 2003b, p. 71)	Funds to repave sidewalks, improve signs and lighting, provide new benches, improve exterior facades of damaged buildings
C. Tax Benefits			
Liberty Zone tax benefits (IRS tax benefits)	Businesses south of Canal Street (both large and small)	Accelerated depreciation valued at \$2.6 billion (City of New York, Office of the Comptroller, 2002, p. 47)	30 percent first-year depreciation on property that is rehabilitated or replaced; five-year recovery period for depreciation of leasehold improvements; other benefits (Empire State Development Corporation, 2002d)
Liberty Bond program (IRS tax benefits)	Private-sector residential or commercial projects in Lower Manhattan; up to \$2 billion of the \$8 billion in bonds could be used outside Lower Manhattan (Wyatt et. al, 2002); available to small or large businesses	Taxes avoided were valued at \$1.2 billion (City of New York, Office of the Comptroller, 2002, p. 47)	Up to \$8 billion in tax-exempt private-activity bonds (Empire State Development Corporation, 2002e)

of these benefits in our summary of benefits to New York City businesses because our focus is on compensation and assistance targeted at New York City, and these benefits were provided to the airline industry nationwide.

The Air Transportation Safety and System Stabilization Act provided \$5 billion in emergency assistance to compensate air carriers for losses stemming from the September 11 attack and to reimburse carriers for increases in war risk insurance coverage.²³ Carriers made claims to the Department of Transportation, which were then reviewed and paid based on the lesser of their actual losses and a market share formula prescribed in the Act. Overall, the Department of Transportation distributed \$4.6 billion, with \$4.1 billion going to the 14 major carriers. The major carriers, taken together, recovered 73 percent of their claimed losses, with eight recovering their full loss (U.S. General Accounting Office, 2003a, p.2). The Federal Aviation Administration (FAA) reimbursed 183 carriers \$68 million for increased insurance costs. The FAA also began to provide war risk insurance directly (U.S. General Accounting Office, 2003a, p.3). The authority to provide war risk insurance expired in August 2004.

The Air Transportation Safety and System Stabilization Act also set up the Air Transportation Stabilization Board and authorized the Board to issue up to \$10 billion in federal loan guarantees. Through September 2003, the Board approved loan guarantees to seven airlines. Five of the loans closed with combined guarantees of \$1.6 billion (U.S. Department of the Treasury, 2003). The cost of this program to taxpayers has not been estimated.

Charity

Charities stepped in with a number of programs aimed at helping small businesses in Lower Manhattan. Table 7.4 lists some of the highest-profile programs, but also lists several lesser-known programs to illustrate the diversity of the charitable response. Highlights of these programs follow.

- Seedco and the Downtown Alliance came together to form the Lower Manhattan Small Business and Workforce Retention Project (LMSBWRB).²⁴ The project was funded by the Ford Foundation, the New York Times Neediest Fund, The September 11th Fund, a number of large companies, and others. The LMSBWRB provided \$4.4 million in low-interest loans and \$5.8 million in grants to 500 small businesses south of Canal Street through September 2002. It also provided \$3.5 million in wage subsidies and provided technical assistance to 200 firms.

²³ War risk insurance covers losses due to war, terrorism, or other hostile acts.

²⁴ Seedco provided low-interest loans, grants, technical assistance, wage subsidies, and services in Lower Manhattan after the attack to enhance the capacity of small businesses to stay in business or to reopen.

Table 7.4
Overview of Charitable Assistance to Small Businesses in New York City

Source	Eligible Population	Expenditures	Description of Benefits
Lower Manhattan Small Business and Workforce Retention Project (administered by Seedco and the Downtown Alliance, funded by Ford Foundation, New York Times Foundation, The September 11th Fund, Pepsico, Vivendi Universal, New York State Department of Labor, others)	Initially, retail and manufacturing businesses on or below Canal Street; in summer of 2002, expanded to service businesses with ten or fewer employees	Through September 2002, \$7.4 million in loans and \$5.8 million in grants to 600 small businesses; \$3.5 million in wage subsidies to 1,181 employees in more than 220 firms; 200 firms received technical assistance (Seedco, 2002a, p. 7)	Low-interest loans up to \$100,000 for six months to three years; grants up to \$25,000 for physical damage caused by 9/11 that was not covered by insurance or other sources; grants up to \$50,000 for firms in the "Frozen Zone" (the area in which public access was restricted) to cover ongoing expenses and to relocate in Lower Manhattan; 50 percent wage subsidies for employees earning \$12 per hour or less or \$25 per hour or less for firms in WTC (Seedco, 2002b)
Financial Recovery Fund (funded and administered by the New York City Partnership and Chamber of Commerce)	Retailers and restaurants with 50 to 100 employees; other businesses with four to 100 employees; located on or below Chambers Street on 9/11	\$6 million budget	Recoverable grants of \$25,000 to \$250,000 (Seessel, 2002a, p. 13)
New York Arts Recovery Fund (funded by the New York Foundation for the Arts)	Individual New York City artists or artists in New York City that apply as small businesses; proximity to WTC considered	Not available	Grants up to \$10,000 for individuals; amounts for businesses depend on size and financial need, costs of damage to property or health, relocation needs, events cancelled, and income lost (Seedco, 2002b, p. 19)
Citibank Disaster Loan Program	Applicant must have also applied for an SBA loan, provided a written statement of how the business has been affected by 9/11, and meet regular lending criteria	Not available	4 percent loans of up to \$100,000 for up to six months (Seedco, 2002b, p. 27)

Table 7.4—Continued

Source	Eligible Population	Expenditures	Description of Benefits
ReSTART Central (formed by ESDC, NYEDC, and New York City Partnership; funded by Ernst & Young foundations, ESDC, The September 11th Fund, private donations)	Businesses on or south of 14th Street with 50 or fewer employees	More than 1,300 businesses assisted through May 2003	Provided discounted and donated goods and services (computers, phones, furniture, marketing and business consulting) (ReSTART Central for NYC Business, 2003)
WTC Small Business Recovery Fund (established by New York State Small Business Development Center and New York Business Development Corporation; funded by government and private sources)	Directly and indirectly impacted small businesses	Total aid package was \$1.5 million; amount of loans made unknown	\$5,000 loans with no interest or principal payments for six months, 3 percent interest thereafter (48-hour turnaround for directly affected firms; subsidize participating lenders to achieve 3.5 percent loans up to \$25,000 for directly and indirectly impacted firms) (New York State Small Business Development Center, 2001)
Andrew Mellon Fund for the Cultural and Performing Arts	Large and small New York City cultural and performing arts organizations that were affected by cancelled performances, reduced tourism, cancelled fund-raising events, or physical damage	\$50 million	Awards based on documented losses; overall paid roughly 50 percent of documented losses of organizations that applied (Seessel, 2002b, p. 14)

- The Financial Recovery Fund of the New York City Partnership and the Chamber of Commerce budgeted \$6 million for recoverable grants (zero-interest loans) to small firms that were south of Chambers Street on 9/11.
- A number of private-sector lenders made low-interest loans available to small businesses. For example, Citibank created a disaster loan program that provided 4 percent loans for up to six months to businesses that met regular lending requirements, had applied for an SBA loan, and were affected by the attacks.
- Small no-interest or low-interest loans were available from the WTC Small Business Recovery Fund established by the New York Small Business Development Center and made possible by funding from private and government sources.
- ReStart Central provided discounted and donated goods and services (such as furniture, computers, cell phones, and phone equipment) to businesses south of 14th Street with 50 or fewer employees.

These programs provided loans and grants to small businesses that did not qualify for government programs or were not awarded as much as was requested. The collateral requirements were often less strict than government programs as were documentation requirements on immigration status (Seessel, 2003, p. 22). Those we interviewed in some of the organizations running these programs said their programs did not require tax filings to be up to date. These programs also moved very quickly. Many started offering assistance in October and November 2001 (U.S. General Accounting Office, 2002b, p. 24). The Small Business Administration made loans quickly, but the larger government programs administered by Empire State Development Corporation and the Lower Manhattan Development Corporation did not kick off until months later.

Projected Benefits from Charity. The Foundation Center estimated that charities distributed \$75 million through September 2003 to businesses and nonprofits in New York City affected by the attacks. It also projected that charities would distribute another \$31 million for a total of \$106 million. Assistance to businesses accounted for \$72 million of the total and assistance to nonprofits accounted for the remaining \$34 million.²⁵

²⁵ Seessel (2003, p. 23) estimates that charities donated about \$50 million for programs to help small businesses in New York City. The GAO reports that The September 11th Fund alone provided \$50 million to help small businesses, some of which is undoubtedly counted in the \$50 million figure estimated by Seessel. The Andrew Mellon Foundation donated \$50 million to cultural and performing arts organizations, both large and small, in New York City.

Summary of Benefits for Businesses Affected by the Attack

Table 7.5 presents an overview of the benefits provided to businesses by the four compensation mechanisms. Nearly 75 percent of the \$23.3 billion in total benefits was paid by insurance. As of July 2004, the tort system had not been a source of compensation for businesses. Government programs provided approximately one-quarter of the total. Benefits from charities, while substantial, were slight compared with the amounts provided by insurance and government.

Insurers provided a large share of the total payment to cover business property damage: Insurers paid \$7.5 billion while the government paid \$750 million to rebuild investor-owned utility infrastructure and roughly \$10 million for subsidies on physical-loss disaster loans.

The remaining government benefits were split between programs that compensated businesses for income losses due to the attacks and programs that provided

Table 7.5
Major Benefits Provided to Businesses in New York City Through the Four Compensation Mechanisms

Benefit Mechanism	Amount (\$millions)
Insurance	
Property damage (excluding aircraft)	7,470
Business interruption and event cancellation	9,510
Total quantified insurance benefits	16,980
Tort	Uncertain
Government Programs	
For property damage	
Low-interest loans for small business	10
Utility company grants	750
Compensation for income losses	
Business recovery grant for small businesses	580
City and state small-firm grants	20
Incentives	
Small business tax credits	630
Other Liberty Zone tax benefits	3,800
Low-interest EIDLs for small businesses	80
Small-firm attraction program	160
Large-firm attraction program	210
Total quantified government benefits	6,240
Charity	110
Total quantified benefits, all mechanisms	23,330

NOTE: Dollar amounts are rounded to the nearest \$10 million.

incentives to revitalize the economy of Lower Manhattan and New York City more generally. Compensation programs included the business recovery grant program for small businesses and the city and state small-firm grants, totaling approximately \$600 million. Tax benefits, the costs of subsidized Economic Injury Disaster Loans, and the small- and large-firm attraction programs provided incentives to revitalize Lower Manhattan and New York City. The total cost of the incentive programs for businesses came to \$4.9 billion, or just over 75 percent of total government benefits.

Assessment of Benefits for Businesses Affected by the Attack

The large proportion of total benefits provided by insurance to businesses affected by the attack on the WTC is striking. It appears that insurance policies were fairly widespread in Lower Manhattan, although probably less common among the smallest firms. Even though insurance payments were sometimes slow, and disputes over business-interruption coverage were common, insurers paid out tremendous sums for property damage and business interruption. Without the payments, the economic disruption caused by the attack would have been much greater. If insurance is not widely held in areas affected by future terrorist attacks, the demand for benefits from government programs, charities, and the tort system would be much greater after such attacks. Less-extensive insurance coverage would also mean that businesses and workers would run the risk of bearing a higher proportion of the losses themselves.

A second noteworthy feature of the array of benefits available to New York City businesses was the unprecedented government response. Low-interest loans and occasionally funds for long-term revitalization have characterized the government programs available to businesses in previous disasters. In the case of 9/11, federal funds were used for the first time to compensate businesses for losses not covered by insurance. FEMA provided funds to investor-owned utilities to rebuild private infrastructure, something it had not done on any significant scale in the past. HUD funds were allocated for economic revitalization on an entirely different scale than before. Geographically targeted tax relief was provided for the first time after a disaster. On a lesser note, even the loan limits for SBA loans were increased from \$1.5 million to \$10 million after 9/11.

On the face of it, the programs adopted by Congress and the Bush administration indicate that the federal government viewed the preexisting government programs as being inadequate for dealing with the scope and type of losses caused by the September 11 attacks.

Equity Issues

It was widely believed among those we interviewed that the benefits available to small businesses fell well short of their losses. Many small business owners lost a great deal

of the investment they had made in their businesses and saw their incomes plummet after September 11. The director of an organization that provides assistance to small businesses in Lower Manhattan observed that it took some time for the policy community and the public at large to realize that small businesses, too, were victims of the attack on the WTC. The GAO finding discussed above—that business-recovery grants covered 17 percent or less of the losses not reimbursed by insurance or government programs for half of the firms that received grant payments—supports the belief that benefits to small businesses fell well short of their losses.

The smallest firms may have been particularly hard hit by the WTC attack. The smallest firms were excluded, at least initially, from some government programs. For example, the WTC Small Firm Attraction and Retention Grant Program initially excluded firms with fewer than ten employees. The minimum-size requirement was eventually dropped after vocal protest from the small-business community. It may make sense on efficiency grounds to exclude the smallest firms from government programs because a program's impact on job retention, for example, may not merit the administrative costs of processing the program application, but such an exclusion is open to criticism on corrective justice grounds.

There were a number of factors that made it difficult to direct resources to the small businesses in New York City after 9/11:

- Language was often a barrier. Small-business owners in Lower Manhattan speak many different languages, and many of them are not fluent in English. It was difficult for these business owners to find out which programs were available to them, communicate their needs, and fill out applications.
- Many small-business owners were concerned about officials questioning them on their immigration status, even those who were legal U.S. residents, and therefore were reluctant to apply for benefits. Some of these business owners were undocumented and either were not eligible for some programs or were afraid to apply for fear of being deported.
- A lack of business records and the fear of being audited by the IRS kept some businesses from applying for aid. Interviewees told us that it is not uncommon for small businesses that operate on a cash-only basis to keep few records. Some may also have no records of filing tax returns.

Community-based business-assistance organizations filled in some of the gaps left by government programs. These organizations were able to provide assistance to business owners who were reluctant to approach the government for help. These organizations also had less-strict documentation requirements. The amount of money funneled through these organizations, however, was not large relative to the other sources of assistance available to businesses.

Significant tax breaks and other incentives were available to large businesses after 9/11, but uncompensated losses for at least some large businesses were undoubtedly sizable. Nevertheless, the stakeholders we interviewed for this study seemed to be unconcerned about the financial losses of large firms. This lack of concern implies that the interviewees may have thought that large firms could take care of themselves, or perhaps they thought that large firms' losses were small relative to their total assets. From a corrective justice perspective, however, losses suffered by all firms, regardless of their size, are relevant.

The benefits provided to small businesses raise issues on distributive justice grounds. Many of those we interviewed thought that small businesses were among the least well compensated of the victim groups after 9/11. Many interviewees also thought that benefits to businesses could have been better targeted according to need. For example, some interviewees pointed out that small businesses that had been located in the World Trade Center received no greater benefits from programs than did other firms in Lower Manhattan, even though those small firms in the WTC were the most seriously affected by the attack.²⁶ Other interviewees noted that many programs were focused on businesses in Lower Manhattan, even though many other small businesses throughout New York City and the metropolitan region were severely affected. The *New York Times* (Wyatt, 2003) found that a sizable proportion of business-recovery grant program dollars for small businesses went to finance and law firms, which some interviewees thought were in less-precarious financial straits than other small firms.

Efficiency Issues

Performance of the compensation system in terms of speed and coordination following the attack on the WTC was mixed. The SBA, charities, and some city and state programs made low-interest loans and grants available quickly after September 11. The much larger programs administered by the Empire State Development Corporation and the Lower Manhattan Development Corporation did not distribute funds until many months later. Businesses criticized the slow response of those programs. For example, some interviewees complained that they had to decide whether to relocate from Lower Manhattan before the benefits offered by the Lower Manhattan Attraction and Retention Program were announced.

As with other victim groups, the benefits available to businesses were not well coordinated. HUD's inspector general noted the challenges that HUD faced in avoiding duplication of benefits from the Business Recovery Grant Program and other government programs, such as the SBA's low-interest loan program (U.S. General Accounting Office, 2003a, p. 53). Several interviewees told us that businesses,

²⁶ There are exceptions to this statement. For example, as mentioned earlier, benefits from the World Trade Center Business Recovery Grant Program depended on a business's proximity to the World Trade Center.

large and small, were poorly informed and confused about the array of programs available to them.

From an efficiency point of view, the most germane components of the response effort were the large incentives to revitalize Lower Manhattan. The attacks struck at the financial heart of the nation, and advocates for aid to New York City effectively argued that the nation's economy as a whole would be adversely affected if the city's economy did not quickly recover after 9/11.

SBA programs were judged by many of those we interviewed as an ineffective means either to help small businesses in need or to revitalize the Lower Manhattan economy. Many interviewees were critical of the complexity of the SBA loan application form and, as mentioned above, the amount of time that elapsed between submission of a loan application and loan disbursement. Requirements for loan collateral were a substantial impediment to businesses considering low-interest loans. Even though the SBA required only partial collateral, applicants were required to put up available personal assets, including a home, as collateral. With the dramatic decline in the number of workers and residents in Lower Manhattan after 9/11, many small businesses thought the prospects for their businesses were highly uncertain. Therefore, many were unwilling to risk their personal assets to secure even a low-interest loan.

The economy of Lower Manhattan has recovered since 9/11, but weak spots remain. By mid-2003, residential vacancies were low, but financial-industry jobs continued to leave Lower Manhattan, and many retail stores and small businesses continued to struggle (Hermann, 2003). According to city and state figures, the number of downtown businesses was still 5 percent lower in mid-2003 than it was before 9/11, and the number of people employed by businesses in Lower Manhattan (excluding those who had worked in the World Trade Center) was down 14 percent (Wyatt, 2003). It is difficult to determine what role the compensation and revitalization programs played in the economic recovery of Lower Manhattan and to what extent the lack of a full recovery was due to general economic conditions. Whether these programs make sense from a national perspective depends on whether the programs' benefits were greater than their costs. One factor that should enter into the equation is the extent to which revitalization programs reduce incentives for businesses to buy terrorism insurance to protect against losses from future attacks. A second factor is the impact of revitalization efforts on domestic security. Rebuilding Lower Manhattan may re-create a prime target for terrorists, and any evaluation of Lower Manhattan revitalization programs should consider whether rebuilding Lower Manhattan is preferable to reducing its attractiveness to terrorists by encouraging businesses to disperse to suburban areas.

Total Quantified Benefits and Issues for the Future

In the previous chapters, we examined the benefits received by those who were killed or seriously injured in the September 11 attacks and the benefits received by those who suffered emotional injuries, injuries due to environmental exposures, property damage, or financial loss in New York City due to the attack on the World Trade Center. We assessed the performance of the compensation system for each of those groups in terms of equity and efficiency.

In this final chapter, we aggregate the quantified benefits across the victim groups. We also total the benefits by type of loss. So far in this report, we have discussed the performance of each compensation mechanism in the context of each victim group. To better understand the overall role and performance of each mechanism, we aggregate quantified benefits provided by each mechanism across all victim groups and make overarching observations on the performance of each mechanism. We conclude this chapter by identifying fundamental issues that policymakers should address as they move forward to shape a system for compensating losses in the event of a future terrorist attack.

Total Quantified Benefits

Summary of Benefits by Victim Group

Table 8.1 pulls together our estimates of the benefits provided to those killed or seriously injured in the 9/11 attacks and to individuals and businesses in New York City after 9/11. It proved difficult to precisely quantify the benefits paid by many programs; therefore, a number of approximations were made. We also were unable to develop estimates for some categories, and therefore costs of such benefits are missing from the totals. Table 8.1 thus provides only a rough sense of how resources were allocated across the various victim groups. The assumptions behind and the limitations of the data in Table 8.1 are detailed in Appendix E, which includes a tabulation of benefit estimates.

Table 8.1
Summary of Quantified Benefits by Victim Group

	Insurance	Tort	Government	Charity	All Compensation Mechanisms	% of Total
A. Expenditures (\$millions)						
D&SI civilians ^a	2,000	0	5,960	710 ^c	8,670	23
D&SI emergency responders ^a	0	0	1,420	500 ^c	1,920	5
Those injured from environmental exposure	60 ^b	0	540	60	660	2
Those with emotional injuries	30 ^b	0	140	40	210	1
Residents	500	0	340	80	920	2
Workers	0	0	1,160	540	1,700	4
Businesses	16,980	0	6,240	110	23,330	61
Unallocated	0	0	0	650	650	2
Total	19,570	0	15,800	2,690	38,060	100
B. Percentage of Victim Benefits Provided by Each Mechanism						
D&SI civilian	23	0	69	8	100	
D&SI emergency responders	0	0	74	26	100	
Those injured from environmental exposure	9	0	82	9	100	
Those with emotional injuries	14	0	67	19	100	
Residents	54	0	37	9	100	
Workers	0	0	68	32	100	
Businesses	73	0	27	< 1	100	
Unallocated	0	0	0	100	100	

^a D&SI = dead and seriously injured. Seriously injured refers to those hospitalized in the immediate aftermath of the attacks for at least one day.

^b Does not include payments by health insurers and employees assistance plans.

^c Does not include income and estate tax benefits.

Overall, we were able to capture \$38.1 billion in cash payments and services from the four compensation mechanisms for the various victim groups. The total includes payments for all those killed or seriously injured, whether at the World Trade Center, the Pentagon, or the Pennsylvania crash site, and for businesses and individuals in New York City. We were not able to allocate approximately 25 percent of the money distributed by charities to victim groups. Much of the \$650 million that we were unable to allocate had not been distributed at the time of this writing.¹

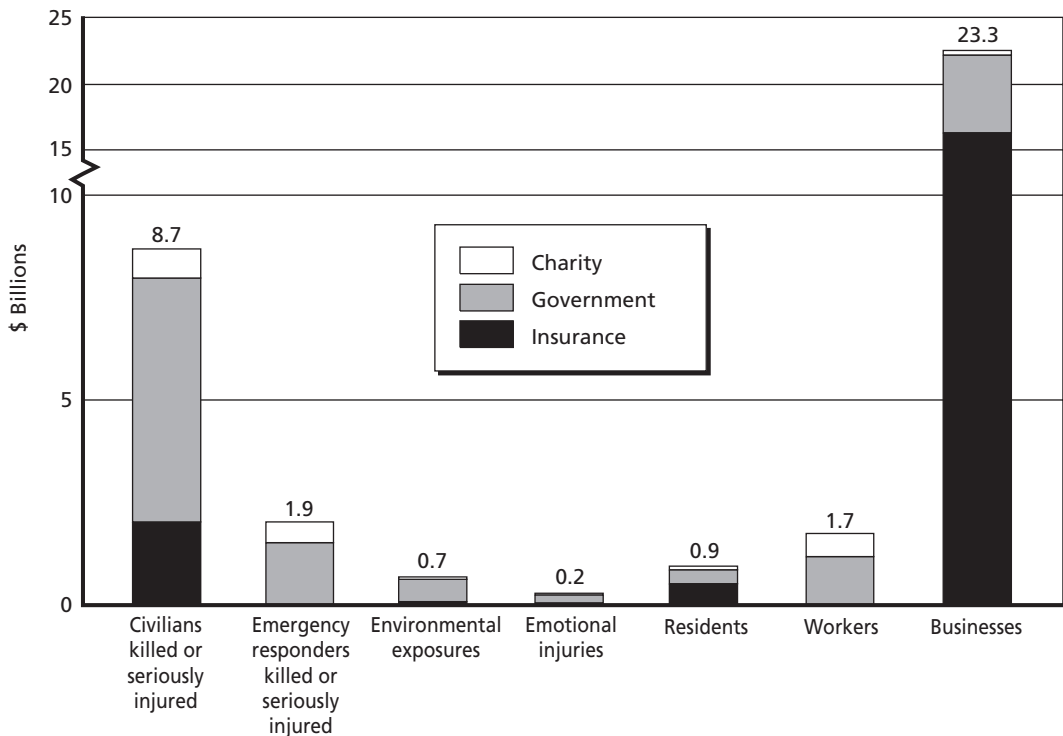
¹ See Renz, Cuccaro, and Marino, 2003 (p. 21) for a description of the funds that had not been spent through September 2003.

One of the most striking findings is the large proportion of overall benefits that went to businesses. As shown in the right-most two columns of Panel A in Table 8.1 and by Figure 8.1, businesses received \$23.3 billion, or 61 percent of the total. The share would decline if the value of tax benefits for those killed in the attacks and payments by private health insurers were included, but the share would undoubtedly remain high. The high proportion of benefits that went to businesses reflects both the considerable property damage suffered by businesses due to 9/11 and the substantial effects of the attacks on the New York City economy.

The benefits provided to workers also reflect the extensive economic impact of the attacks. The aid provided directly to workers is much less than that provided to businesses, but workers also indirectly benefited from benefits provided to businesses.

The benefits we were able to quantify for those who were killed or seriously injured in the attacks amounted to nearly \$10.6 billion, or 28 percent of the total

Figure 8.1
Quantified Benefits by Victim Group and Source of Benefits



RAND MG264-8.1

NOTE: The first column, reading from left to right, includes benefits for those killed or seriously injured at the World Trade Center, the Pentagon, and the Pennsylvania plane crash site. The figure does not include \$650 million in unallocated charitable benefits.

across all victim groups. Emergency responders received about 18 percent of the benefits going to the dead or seriously injured, although they accounted for only 14 percent of those killed or seriously injured.

While substantial, the benefits we could quantify for injuries from environmental exposures and emotional injuries are a small percentage of the \$38.1 billion total. The proportion would be somewhat larger if payments by private health insurer and employee assistance programs were included in the total.

Panel B of Table 8.1 provides insight into how the source of benefits differed across the various victim groups. Businesses were the most dependent on insurance, receiving benefits through property damage and business interruption policies. Residents and those killed or seriously injured also received a substantial share of benefits through personal property insurance and life insurance, respectively.

Workers, emergency responders, and those with emotional injuries were the victim groups that relied on charities most heavily. Each victim group received a substantial proportion of the quantified benefits they received from the government. For example, workers received more than two-thirds of their benefits from the government. Government programs played the leading role in compensating those with injuries due to environmental exposures and those with emotional injuries, but the importance of those programs would decline if estimates of expenditures by private health insurers and employee assistance plans were available.

Summary of Benefits by Type of Loss

Table 8.2 categorizes benefits by type of loss (defined in Chapter Two). The type-of-loss categories pull together benefits for various victim groups. Benefits for death and personal injury are the sum of benefits for the first four victim groups listed in Table 8.1: dead and seriously injured civilians, dead and seriously injured emergency responders, those who suffered injury due to environmental exposures, and those with emotional trauma. Benefits for property damage are a combination of benefits paid to residents and benefits paid to reimburse business property damage. Income loss captures benefits to businesses for lost revenue and benefits to workers for reduced income due to the effects of the attack on the WTC on the economy. Benefits for revitalization combine incentives to residents and businesses to stay in or move to Lower Manhattan.

The distribution of benefits by type of loss also illustrates the degree of economic disruption caused by the attack on the WTC. Forty-five percent of total benefits were spent to cover income loss and incentives for revitalization. Efforts to revitalize Lower Manhattan cost \$5.3 billion, or 14 percent of the total benefits provided. Roughly 30 percent of the benefits that we could quantify compensated personal injury, and nearly one-quarter went to cover property damage.

Table 8.2
Summary of Quantified Benefits by Type of Loss

	Insurance	Tort	Government	Charity	All Compensation Mechanisms	% of Total
A. Expenditures (\$millions)						
Death and personal injury	2,090	0	8,010	1,310	11,410	30
Property damage	7,970	0	910	80	8,960	24
Income loss	9,510	0	1,690	540	11,740	31
Revitalization	0	0	5,190	110	5,300	14
Unallocated	0	0	0	650	650	2
Total	19,570	0	15,800	2,690	38,060	100
B. Percentage of Benefits Provided by Each Mechanism						
Personal injury	18	0	70	11	100	
Property damage	89	0	10	1	100	
Income loss	81	0	14	5	100	
Revitalization	0	0	98	2	100	
Unallocated	0	0	0	100	100	

As shown in the bottom panel of Table 8.1, government programs provided nearly all the benefits for economic revitalization and a substantial share of benefits for personal injury. Insurers played the biggest role in reimbursing property damage and income loss (because of the large business-interruption payments from insurers).

Summary of Benefits by Compensation Mechanism

Table 8.3 recasts the data in Table 8.1 according to the distributions of each of the four compensation mechanisms across the victim groups. Panel A shows the percentage of overall dollar value and expenditures provided by each compensation mechanism. Panels B and C show how the benefits provided by each mechanism were allocated across the victim-group and type-of-loss categories. Figure 8.2 illustrates the breakdown of overall benefits by compensation mechanism.

Insurance. The insurance industry pushed large amounts of money out their doors after the September 11 attacks. As shown in Panel A of Table 8.3, insurance payments accounted for more than half the \$38.1 billion in total quantified benefits. Our estimates likely understate insurance payments in New York City because they do not include payments by health insurers for mental health care, respiratory injuries, and other injuries after the attacks. In any case, insurers played the predominant role in providing benefits to businesses and individuals after the attacks.

Insurers were able to mobilize hundreds of adjusters to evaluate and process claims after 9/11. Many of those we interviewed praised the insurance industry for its response and for generously interpreting many of its policies. Words of criticism were

Table 8.3
Summary of Total Quantified Benefits by Compensation Mechanism

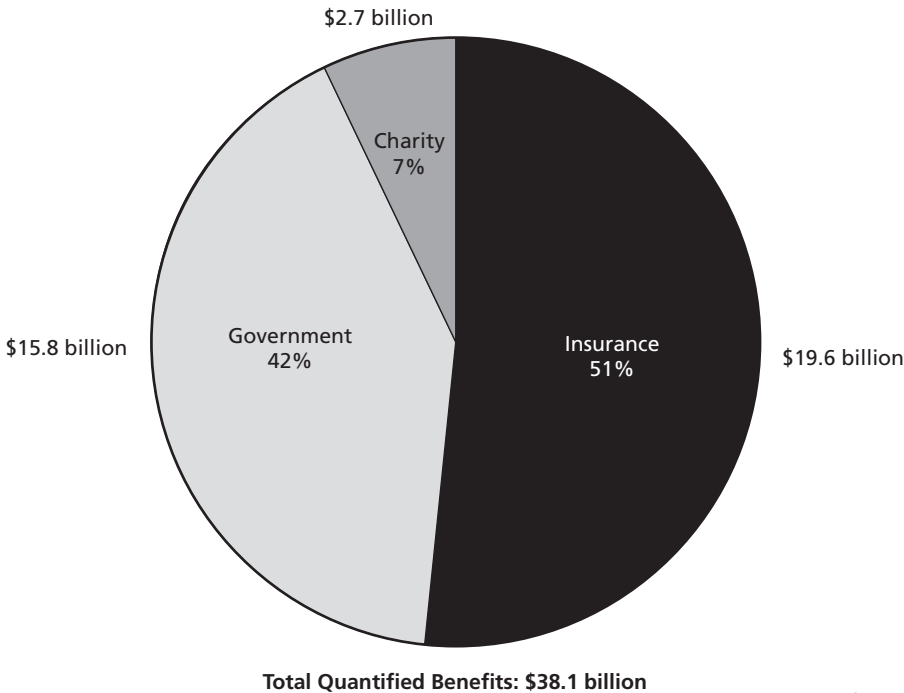
	Insurance	Tort	Government	Charity	All Mechanisms
A. Total Expenditures by Mechanism					
Total (\$billions)	19.57	0	15.80	2.69	38.06
Percentage of expenditures from all mechanisms	51	0	42	7	100
B. Allocation of Mechanism Expenditures by Victim Group (%)					
D&SI civilians	10	—	38	26	23
D&SI emergency responders	0	—	9	19	5
Those injured from environmental exposure	< 1	—	3	2	2
Those with emotional injuries	< 1	—	1	1	1
Residents	3	—	2	3	2
Workers	0	—	7	20	4
Businesses	87	—	39	4	61
Unallocated	0	—	0	24	2
Total	100	—	100	100	100
C. Allocation of Mechanism Expenditures by Type of Loss (%)					
Death or personal injury	11	—	51	49	30
Property damage	41	—	6	3	24
Income loss	49	—	11	20	31
Revitalization	0	—	33	4	14
Unallocated	0	—	0	24	2
Total	100	—	100	100	100

few except for the feedback on business-interruption insurance. As discussed in Chapter Seven, there were problems with business-interruption insurance, including slow claims processing and disputes over coverage.

More than 85 percent of insurance payments went to businesses (see Panel B of Table 8.3). Those killed and injured received most of the remainder, with a small percentage covering residential property damage. Even though insurance payments overall were substantial, insurance payments were modest compared with losses in many cases. For example, high-income earners often carried small amounts of life insurance relative to their annual earnings, and many small businesses had very limited or no business-interruption insurance.

Tort. Liability caps and the Victim Compensation Fund limited the role of the tort system after 9/11. Nearly all the families of those killed decided to go through the VCF, and a large number of the emergency responders considering claims for respiratory injuries against the City of New York in the end applied to the VCF instead. Some tort cases stemming from the 9/11 attacks are being pursued, however.

Figure 8.2
Quantified Benefits by Compensation Mechanism



RAND MR264-8.2

Approximately 70 families are pursuing wrongful death cases; a class-action suit has been filed on behalf of site cleanup workers; suits have been filed against the EPA on behalf of residents and workers in Lower Manhattan and Brooklyn; and lawsuits have been filed by businesses, individuals, and the Port Authority of New York and New Jersey against the Saudi royal family, the Saudi government, and al Qaeda. It will be some time before solid estimates are available for the amount that will ultimately be paid out through the tort system.

Government Programs. Government provided benefits of \$15.8 billion, or 42 percent of the total, not including the value of the income and estate taxes provided to those killed in the attacks. Our focus is on benefits to individuals and businesses in New York City after 9/11. The total, thus, does not include assistance to airlines. Nor does it include the costs of cleaning up the site or benefits paid for the repair of public buildings, the transportation system, and other components of the public infrastructure in New York City.

As shown in Panel C of Table 8.3, more than one-half of government expenditures went to those who died or suffered seriously physical injury or suffered respiratory or emotional injury in New York City due to 9/11, with the bulk going to those

who were killed or seriously injured. Incentives to businesses and residents to revitalize Lower Manhattan accounted for roughly one-third of government expenditures and were roughly three times the payments to businesses and workers to offset income losses (33 percent versus 11 percent).

Government response went far beyond that for most disasters. The level of response illustrated both the uniqueness of 9/11 and the shortcomings of the existing programs for addressing losses of this scale and scope. Large payments by the VCF to those who were killed and injured in the 9/11 attacks were in response to the tort restrictions adopted after 9/11. New programs were created and existing programs were expanded to address the far-reaching emotional consequences of the events of 9/11. New programs were also created to address exposure to hazardous substances released by the collapse of the WTC. The substantial economic effects on businesses and workers induced program expansions that provided compensation for economic loss (not associated with physical injury) to both businesses and workers. Expenditures on incentives for economic revitalization also were made on a scale never before experienced.

While the amount of resources to individuals and businesses after 9/11 was unprecedented, performance of the various government agencies was uneven. Most interviewees positively assessed the response of the VCF, unemployment insurance, Medicaid, and Social Security to the crisis. FEMA, on the other hand, was roundly criticized by those we interviewed, the media, and other analysts. Respondents from virtually all stakeholder groups believed that FEMA's response was much too slow and that it was inflexible in adapting programs to the particular circumstances of the World Trade Center. Because FEMA's programs for responding to the broader economic impacts of a disaster are limited, FEMA was poorly suited to respond to a disaster with such large economic ripple effects on workers and businesses. Many interviewees believed that FEMA's application forms were too long and overly complicated and that it did a poor job of communicating eligibility standards. As discussed in previous chapters, FEMA was criticized for doing a poor job of coordinating with and taking advantage of charities' resources. As Chapter Four concluded, the EPA and state and local environmental protection agencies handled the pollution threats poorly, and that while the efforts by FEMA to address emotional injuries are to be applauded, the programs did not effectively address longer-term needs.

Charity. Charities quickly raised a tremendous amount of money after 9/11. Charities were commended by many of those we interviewed for responding to the disaster promptly and for distributing substantial amounts of money in short order. In many cases, they provided assistance more quickly than did FEMA or other government programs. Charities also quickly mobilized large numbers of volunteers. Relying primarily on local volunteers who can be mobilized on short notice contrasts with the FEMA staffing strategy, which calls for flying full-time FEMA staff from

around the country to disaster sites (a strategy that has significant limitations if flights are grounded in the aftermath of a large terrorist attack).

As shown in Table 8.3, one-half of the charitable distributions that we were able to allocate went to those who were killed or injured (including emotionally injured), with the lion's share of that amount going to those who were killed or seriously injured. Like government, charities took on new roles in responding to 9/11. Tax guidelines normally require charities to distribute aid based on need. The Internal Revenue Service waived this requirement for assistance to those killed in the 9/11 attacks, and charities distributed assistance to the deceased that went far beyond the basic needs of the survivors.

Charities identified needs that were missed by government and insurance programs. In particular, they provided assistance to undocumented workers, those who did not qualify for unemployment insurance, and small businesses. Charities also drew attention to and provided important resources for mental health needs, an area which prior to 9/11 had not been emphasized in federal disaster relief programs. Although charities were praised for identifying unmet needs, the largest charities were criticized by some observers for focusing too much of their resources on Lower Manhattan and paying too little attention to other parts of the metropolitan region.

Particularly in the immediate aftermath of the World Trade Center attack, coordination among and between charities and the government was poor. The bigger charities did not talk to the smaller charities, and for many months there was almost no way one charity could find out what an applicant had received from another charity. This uncertainty opened the door to both the possibility of uneven distribution of benefits across similarly situated applicants and applicant fraud. Charities did not coordinate well with FEMA, although this was likely due as much to FEMA's communication strategy as it was to choices made by the charities. Charities should be credited for acknowledging the coordination problem and trying to do something about it by setting up the 9/11 United Services Group to address the problem (see Chapter Three).

Charities' efforts to communicate with those in need also came up short, according to many of our interviewees. Language barriers hindered charities from communicating with various ethnic groups. Many of those in need found it difficult to keep up with the rapid change in benefits, and the descriptions of available benefits were often unclear.

The application process for aid from charities was often burdensome as well. Applications were often very lengthy and, due to the lack of coordination across charities, also repetitious. Advocates for undocumented workers felt that some charities required too much documentation from those workers. The documentation issue was a tough one for charities to address. Too little documentation would potentially leave them open to fraud, but too much documentation creates barriers to those who need aid and causes delays in distributing that aid.

Finally, the charitable response was strongly criticized by interviewees representing higher-income earners who were killed or seriously injured in the attack on the WTC. They were resentful that the charities had raised money on the pretext (in their view) that it would be distributed to survivors of the deceased and to the seriously injured, but instead large amounts of money were distributed to other groups. Others, however, questioned whether it was appropriate to waive IRS guidelines and distribute aid to survivors of the deceased and to the seriously injured when arguably their needs were well met by the VCF.

Moving Forward: Issues to Address in Designing Systems to Compensate Losses from Future Terrorist Attacks

The benefits received by those who were killed or injured or who suffered financial losses due to the September 11 attacks were the result of a unique combination of benefits from insurance, tort, government programs, and charity. Given the following points, there is no guarantee that a similar mix of resources will be available for victims of future attacks.

- Insurance played the leading role in providing compensation for losses caused by the attacks, but the magnitude of insurance payouts in the event of a future major attack is highly uncertain. Even with the Terrorism Risk Insurance Act in place, purchase of terrorism insurance after 9/11 has been spotty.² The availability and use of terrorism insurance after the Terrorism Risk Insurance Act sunsets at the end of 2005 is even less certain.
- Tort played a minimal role in providing compensation, but that may not be the case after a future attack. The liability limits that were imposed after 9/11 do not extend to future attacks,³ and it is difficult to predict how Congress will respond in the future.
- While the government programs put in place after 9/11 create a precedent for programs that might be adopted after a future attack, there is no guarantee that similar programs will be adopted in the future.⁴ For example, attempts to ex-

² Insurance broker Marsh & McLennan Companies found that take-up rates in 2003 were between 25 and 30 percent for firms with a total insured value (TIV) between \$5 million and \$500 million, 40 percent for firms with TIV between \$500 million and \$1 billion, and 27 percent for firms with TIV greater than \$1 billion. Terrorism coverage appears to be widespread among the smallest firms *that buy insurance* because terrorism coverage is usually included in those firms' package policies (Marsh, 2004, p. 19).

³ As part of the Domestic Security Act of 2002 (Public Law 107-296, Title VIII, Subtitle G), Congress did limit the liability of firms that sell "qualified anti-terrorism technology."

⁴ Stewart et al. (2002), for example, argue that the VCF will not serve as a model for future compensation programs.

tend the VCF retroactively to past terrorist attacks (such as the 1998 embassy bombings or the Oklahoma City bombing) have failed.

- The charitable response to 9/11 was unprecedented, and whether the public would be so generous after a future attack is uncertain.

In addition, there is no general agreement in the public policy community about the role each compensation mechanism should play in a system to compensate individuals and businesses that have suffered losses from terrorist attacks. We conclude this chapter by identifying issues that policymakers and policy analysts should consider in developing strategies for providing compensation to individuals and businesses affected by a future terrorist attack.

Issues Related to Personal Injury

Benefits for Those Killed or Seriously Injured. Debate is needed on the extent to which those who are killed or seriously injured by a terrorist attack should receive benefits that differ from the benefits received by victims of other crimes or other tragic events. If there is a special obligation to those killed or seriously injured in a terrorist attack, policymakers should consider how the losses should be split between the populace and the government. A fixed, flat amount of government-provided compensation, for example, would place responsibility on high-income earners to purchase life insurance to cover losses beyond those covered by government payments.

Benefits for Those Injured from Environmental Exposure. Potential exposure to hazardous substances presents a new issue in disaster response policy. Programs for cleaning up hazardous substances released by attacks and criteria for awarding government compensation to individuals who have been injured from environmental exposure should be evaluated. In particular, policies regarding compensation for latent injuries should be considered.

Benefits for Those with Emotional Injuries. Current government programs are not well suited to treating or providing compensation for long-lasting emotional injuries that may result from terrorist attacks. Consideration should be given to the costs and benefits of programs to address longer-term injuries and to efforts to increase the capacity of the mental health system to treat emotional injuries caused by terrorist attacks.

Issues Related to Financial Losses

Programs for Workers Affected by a Terrorist Attack. The economic impact of 9/11 on New York City was enormous, and workers who lost their jobs or had their hours cut back were regarded by many observers to be among the least well compensated of the victim groups. FEMA programs are not well suited to providing benefits to workers who are not employed by firms physically affected by an event. Policymakers

should consider the extent to which the existing social safety net provided by government programs should be augmented for those directly, and particularly for those indirectly, affected by an attack.

Benefits for Small Firms. Small firms were also regarded to be among the least well compensated of the victim groups. Policymakers and policy analysts should consider whether equity or economic efficiency considerations warrant expansion of the benefits given to small firms after a major terrorist attack. The degree to which assistance programs should emphasize low-interest loans as opposed to grants should also be considered.

Economic Revitalization Goals. The extent to which government programs should strive to restore economic activity in affected areas to pre-event levels should be considered in the policy debate over compensation for losses due to terrorist attacks. Domestic security should be factored into an analysis of the costs and benefits of revitalization efforts. For example, dispersing economic activity may reduce the number of attractive targets for terrorists but may also result in lower economic productivity.

Undocumented Workers' and Business Owners' Eligibility for Benefits. With the notable exception of the Victim Compensation Fund, undocumented workers and business owners were excluded from most government assistance programs after 9/11. Many people in these groups were in precarious situations financially before 9/11 and fell into dire financial straits after the attacks. Policymakers should consider whether these groups warrant different treatment following a large-scale terrorist attack than what would be the case with other disasters, or whether the needs of these groups should be left to charity to satisfy.

Issues Regarding the Role of and Coordination Among the Four Compensation Mechanisms

The Role of Insurance. Policymakers and policy analysts should consider goals for the role insurance should play in a terrorism compensation system and evaluate what policies would best achieve the ones that are agreed upon. For example, one goal may be for losses to be covered primarily by insurance payments. To achieve such a goal, the federal government might require all property/casualty insurance policies to cover terrorism losses (as is done in France and Spain). Alternatively, terrorism insurance might be viewed as a supplement to government-provided benefits. For example, the government might provide modest payments for business interruption after a terrorist attack and then leave it up to businesses to purchase supplemental business-interruption insurance.

The Role of Tort Liability. If no restrictions are placed on tort remedies, and absent an attractive government program for compensating losses, the tort system may be the primary means available to businesses and individuals for recovering losses in the event of a future terrorist attack. Thought needs to be given to what the

appropriate role of liability should be in such an event. The main disadvantage of tort in recovering losses from terrorism is that the parties primarily responsible for the damages probably lack the resources to compensate victims or are beyond the reach of U.S. courts. Tort liability, however, may create incentives for firms to adopt security measures (e.g., install security systems that may deter attacks or establish evacuation plans that can mitigate the effects of an attack) that reduce the vulnerability of their employees and customers to terrorist attacks. Security implications should be considered when evaluating the role tort should play in a terrorism compensation system.

The Role of Charity. As policies on terrorism compensation are developed, thought should be given to the role that charities should be expected to play in the event of a future terrorist attack. By reducing suspicions about how funds will be spent, a widely accepted role for charities may make it easier for charities to raise funds in the future. A widely accepted role for charities may also reduce controversies over how funds are spent. The key issue for charities is whether they should move beyond their traditional role of giving to meet basic needs and instead compensate victims for some or all of the losses caused by a terrorist attack. Policymakers and policy analysts should evaluate how to best take advantage of the ability of charities to distribute aid quickly, to contact difficult-to-reach populations, and to fill gaps left by other compensation mechanisms.

The Extent to Which Programs Should Be Established and Funded in Advance of or After an Event. Compensation programs can be set up and funded before an event, decided on after an event, or some mix of both. Setting up government compensation programs in advance of a terrorist attack may encourage individuals and firms to determine how they will cover losses that would not be covered by government programs and may strengthen arguments against the creation of additional compensation programs after an attack. Terrorism insurance contracts in effect set up compensation in advance by precommitting resources to be expended in the event of a terrorist attack. Such precommitments by government programs or insurance contracts can also have a downside. They reduce the ability of government, and society more generally, to allocate resources to meet the most pressing needs after an attack. Policymakers should examine the extent to which committing resources in advance serves broad social goals.

Coordination and Sequencing of Compensation Mechanisms. Poor coordination of benefits within and among compensation mechanisms was identified as a problem in our assessment of benefits received by each 9/11 victim group. Policymakers need to address how such coordination might be improved. Increased coordination will not necessarily come cheaply, however, and its costs must be considered along with its benefits. One approach to improving coordination among benefit mechanisms is to impose a sequence on the order in which government, charity, and perhaps insurance would act in providing benefits. Policymakers and stakeholders

more generally should evaluate the advantages and disadvantages of various sequences.

Setting Priorities

The issues discussed above are complex and interrelated. Compensation options should be evaluated in light of the overall goals for the compensation system. Policy analysis can contribute to the decisionmaking process by examining how different options measure up against the various concepts of equity and the extent to which they promote economic efficiency. Domestic security is a particularly important component of overall economic efficiency in this context, and policy analysis can also help policymakers to better understand how domestic security is affected by various compensation approaches. Choosing among alternatives will involve tradeoffs between equity, economic efficiency, and domestic security, and it will be up to policymakers to determine the relative importance of each of these goals.

Overview of the Four Compensation Mechanisms

In this appendix, we provide a brief overview of the four mechanisms that make up the compensation system. For each, we describe who receives compensation, what benefits are paid, who pays, and the fundamental strengths and weaknesses of each mechanism.

Insurance

Individuals and businesses buy insurance that pays off in the event of a loss. The insurance agreement is a contract entered into voluntarily by both the insurer and the insured. In return for a premium, that insurer agrees to make payments under conditions specified in the contract.

Who Receives Compensation?

Those who buy policies receive compensation. Those who cannot afford to buy policies or who do not perceive that the risk warrants the insurance premium do not receive insurance benefits. Liability insurance may also reimburse policyholders for payments awarded to third parties (parties other than the insurer and the policyholder) through tort cases.

What Benefits Are Paid?

Insurance policies are available for many different types of losses. Life insurance policies pay out if the person for whom the policy is written dies. The estate of the deceased party receives the amount of insurance purchased. First-party property/casualty policies cover the property of the insured and typically pay to repair or replace the damaged property up to the policy limits. Third-party or liability insurance covers damage to others caused by the insured. Payments under such policies can cover both the economic and noneconomic losses of the injured party. The payments may be the result of tort cases, but not necessarily. Punitive damages assessed against the insured by a court are typically not covered by insurance contracts.

Who Pays?

Insurers pay using accumulated premiums and investment income. Insurers can also cover payments by taking out insurance policies with other insurers. These so-called reinsurance policies typically pay when an insurer's losses exceed a specified amount on a given line of insurance. By writing policies with a large number of insureds and people purchasing reinsurance, insurers can spread risks widely.

Strengths and Weaknesses

The basic strength of the insurance mechanism is that insurance contracts can be tailored to individual needs. Individuals decide what type of coverage and how much coverage to purchase. The insurance system accesses private-capital markets and sets up a decentralized system to evaluate and pay claims. The private market sets prices for many types of insurance, although much of the insurance industry is closely regulated at the state level. Insurers can also help policyholders take actions that reduce their risks.

One of the main strengths of private insurance as a mechanism for reimbursing losses also can be a weakness. Because purchasing private insurance is voluntary, many people may underinsure, or they may underinsure from the perspective of society at large because they underestimate the risk of an event occurring or expect government disaster assistance if it does occur (Kunreuther, 1984, p. 219). Insurance coverage may be limited for other reasons as well. Low-income people—the very people who may be most vulnerable after a disaster—may not be able to afford insurance. Insurance companies are not eager to offer insurance in some circumstances, e.g., when it is difficult to quantify the risk or when a single event causes many simultaneous losses (Kunreuther, 1998, pp. 27, 37). Finally, while the insurance industry has established an extensive system for evaluating and paying claims, disputes over coverage can result. These disputes can generate extensive legal and other transaction costs and can cause delays in payment.

Tort

The tort system allows injured parties to sue in court those allegedly responsible for their injuries.

Who Receives Compensation?

To receive compensation, those who file suit must typically prove the following:

- Duty—the defendant had a legal duty to reduce risk to the plaintiff
- Causation—the defendant's actions were directly related to the injury in time, space, or sequence

- Negligence—the defendant failed to do something that a reasonable or prudent person would do under the same circumstances
- Damages—there were legally recognized damages caused by the action (see Cooter and Ulen, 2000, p. 291, for additional information).

In some circumstances, parties can be held liable even in the absence of negligence. So-called strict liability often applies in the case of defective or inherently dangerous products or activities.

What Benefits Are Paid?

Awards through the tort system aim to restore the injured party to his or her pre-event state. Compensation can be paid for economic and noneconomic losses. Economic losses include medical payments, wages, or, in the case of business, lost profits. Noneconomic losses include pain and suffering and relational losses, such as the loss of consortium or of parental guidance. When there is willful or reckless misconduct, the jury can also award punitive damages to the plaintiff.

Who Pays?

The defendant, if solvent, pays damage awards to the plaintiff. Both parties must bear their own legal costs, win or lose. Joint and several liability, which applies in many circumstances, allows the injured party to recover all damages from one or more of the named defendants and leaves it to those defendants to try to recover costs from the other defendants, if state law permits.

Strengths and Weaknesses

The tort system seeks to resolve individual cases through a detailed, case-specific consideration of factual and legal issues. The tort system provides an avenue for compensating people harmed by the actions of others, and it may discourage negligent behavior.

On the negative side, the tort system is often slow and generates substantial legal and other transaction costs. Fault is often difficult to determine, and both parties often hire expensive experts to make their points, with testimony impeding the search for the truth. Because it is tailored to individual disputes, the tort system has difficulty efficiently resolving large numbers of similar cases. Class actions and case consolidations are relatively recent adaptations of procedures for dealing with mass injuries, but courts often oppose these procedures and each generates its own controversies. Separate state and federal courts and varying laws and procedures among the states discourage uniformity of decisions and awards. A defendant can incur large defense costs even when it wins a case, and it may be less costly to stop producing a product or to settle nonmeritorious claims than to continue to defend lawsuits. Also,

juries may have difficulty understanding and evaluating the facts in complex cases, making the outcomes of challenges highly unpredictable.

Government Programs

Many types of government programs compensate individuals and businesses. Disaster compensation and assistance are handled primarily by the federal government through two agencies, FEMA and the SBA. FEMA provides grants directly to affected individuals and provides assistance for housing and medical needs. The SBA makes low-interest loans to individuals and to large and small businesses for disaster recovery. Federal and state programs provide compensation to victims of a crime, and federal programs target those suffering certain types of injuries.

Who Receives Compensation?

At the federal level, Congress decides who is eligible for disaster assistance programs and sets the guidelines for the narrower victim-assistance programs.

What Benefits Are Paid?

Government programs typically provide partial, not full, compensation. The goal of these programs is usually to provide a safety net to help those suffering losses to get back on their feet, not to fully compensate them for their injuries. The September 11th Victim Compensation Fund is exceptional in this respect.

Who Pays?

General tax revenues fund most of the federal compensation programs, with some exceptions. For example, the National Childhood Vaccine Program is funded through a tax on vaccine sales.

Strengths and Weaknesses

Public oversight of government compensation and assistance programs helps ensure that benefits are fairly distributed to those meeting the eligibility criteria. Private efforts, in contrast, can focus benefits on narrow subgroups of the affected population. Government programs can provide a safety net to those who have little access to other sources of aid. On the down side, government programs are subject to the vagaries of the budget appropriation process, and they may provide disincentives for individuals to avert risky behavior or insure against it. Government programs can also be slow to respond in the event of a disaster and poor at adapting to atypical aspects of a particular disaster.

Charity

Charities raise money to distribute to various populations or organizations depending on the mission of the charity. Charities are dependent on the generosity of individuals, corporations, and government agencies for the funds they collect and can therefore disperse.

Who Receives Compensation?

The charity determines which groups are eligible for assistance. During the first three months after a disaster or other event, charities such as the Red Cross are allowed by the Internal Revenue Service to distribute aid regardless of need. After that, however, programs must be need-based for a charity to maintain its tax-exempt status.

What Benefits Are Paid?

Charities usually do not attempt to make people “whole” and, as discussed above, are largely prohibited by the IRS from doing so. Their aim, rather, is to get people back on their feet so that they can become productive members of society.

Who Pays?

Those who donate to charities and the taxpayers who subsidize donors’ tax deductions fund charitable assistance. Donations can be raised that are targeted for particular groups or for the victims of a particular disaster. Donations can also be unrestricted, with the decisions as to how to best spend the donations left to the charity’s staff.

Strengths and Weaknesses

Charities can often move more quickly than the government in providing aid to those in need. Their operations can be less bureaucratic and more responsive to those in need and can target those who are left out of government programs. For example, charities can provide benefits to undocumented immigrants, a group that is often not eligible for government direct-assistance programs. The chief weakness of charities is that they are unpredictable. Donations may be substantial for high-profile disasters such as September 11 but may be much more difficult to raise for lower-profile events. This unpredictability makes it very hard to determine in advance what role charities may play in disaster recovery efforts. Charities also have no obligation to serve the neediest groups. Needy populations not popular with donors may be overlooked.

Affiliations of Those Interviewed for This Study

This appendix lists the organizational affiliations, by stakeholder category, of the individuals we interviewed for this study. Sometimes more than one person was interviewed from the same organization. To encourage candid responses to interview questions, the names of the interviewees remain confidential. All interviewees did grant permission to list their organizational affiliations in this report.

Insurance Industry

American Insurance Association
The Hartford Financial Services Group, Inc.
Reinsurance Association of America

Plaintiff Attorneys

Clifford Law Offices
Stewart Tilghman Fox & Bianchi, P.A.
Speiser Kraus, P.C.
Baumeister and Samuels, P.C.

Government Organizations

New York City Mayor's office
House Judiciary Committee, Constitution Subcommittee
Office of Congressman Nadler
Department of the Treasury
Congressional Research Service
Small Business Administration
The Feinberg Group (administrator of September 11th Victim Compensation Fund)
Office of Congresswoman Carolyn Maloney
New York City Economic Development Corporation
U.S. Department of Justice, Office for Victims of Crime
Office of New York City Corporate Counsel
Plunkett & Jaffee, P.C. (advisor to Empire State Development Corporation)

Firms that Lost Large Numbers of Employees

Cantor Fitzgerald, L.P.

Keefe, Bruyette, & Woods, Inc.

Charities and Nongovernmental Organizations

Human Rights Campaign

Legal Defense and Education Fund

Hispanic Federation of New York City

Asian-American Federation of New York City

United Jewish Appeal

Center For Independent Living

Voices of September 11

The New York Immigration Coalition

The September 11th Fund

New York Times 9/11 Neediest Fund

Twin Towers Fund

9/11 United Services Group

American Red Cross of New York

Safe Horizon

McKinsey & Company (consultants to charities)

Small-Business Organizations

Seedco (NGO serving small businesses)

Restart Central (NGO serving small businesses)

Large-Business Organizations

Chamber of Commerce of the United States

Charitable Programs for Emergency Responders

This appendix describes five of the largest charities that provided benefits specifically to emergency responders in New York City after 9/11.

Twin Towers Fund

The Twin Towers Fund stated in its 2002 annual report that it had collected \$209 million and distributed \$196 million to 438 eligible families (\$477,000 per family). It planned to distribute the remaining funds by mid-2003 and would then apply for dissolution under New York State law (The Twin Towers Fund, 2002, p. 2). The Twin Towers Fund heavily focused its financial distributions on the families of emergency responders with young dependents and allocated specific resources to an ongoing scholarship program and to a series of camps for the children of the deceased and seriously injured. It used a relatively broad definition of eligible beneficiary. For example, eligible claimants included same-sex partners and nonmarried partners as long as the prospective claimant could demonstrate a substantial commingling of bank accounts, leases, and other financial documents.

The New York Firefighters Disaster Relief Fund

The New York Firefighters Disaster Relief Fund was created one day after the September 11 attack by the International Association of Fire Fighters (IAFF), the Uniformed Firefighters Association of N.Y. Local 94, and the Uniformed Fire Officers Association of N.Y. Local 854. This fund had collected \$162 million as of November 2002 (Fessenden, 2002) and has distributed most of the funds. Each FDNY family received \$463,000 (paid out in a number of smaller payments). This fund stopped collecting donations as of October 2002. The IAFF continued to solicit funds on a much smaller scale to support a counseling fund that would provide mental health services for both September 11 families, as well as the families of firefighters affected by any future tragedies of this kind.

The New York Police & Fire Widows' & Children's Benefit Fund

The New York Police & Fire Widows' & Children's Benefit Fund was established in 1985 by former New York Mets pitcher Daniel J. "Rusty" Staub to assist the families of police officers and firefighters killed in the line of duty (New York Police and Fire Widows' and Children's Fund, 2003). The charity was initially created to assist solely the families of police officers and firefighters. After the September 11 attacks, this organization expanded its reach to include the families of Port Authority officers and emergency medical specialist (EMS) personnel.

The charity raised more than \$115 million and distributed \$53 million in the 18 months following 9/11 to the families of deceased uniformed emergency responders (including Port Authority and EMS personnel).¹ Through September 2002, it distributed \$100,000 per surviving widow, with an additional distribution of \$18,000 planned for October 2002. The benefit fund decided to make widows of officers slain in the line of duty prior to 9/11 eligible for funds collected after September 11. It made a one-time \$30,000 distribution to each "historical widow" as of September 2002 and planned to distribute an additional \$8,000 per historical widow. The fund plans to distribute between 2003 and 2012 the remainder of the \$115 million that it had raised. Unlike many of the other charities that stopped accepting donations for September 11–related victims, this organization as of 2003 was still actively soliciting donations to meet the financial needs of these widows for the duration of their lives.

The New York Police Department Foundation Heroes Fund

The New York Police Department Foundation, an organization that predated 9/11 by 30 years, found itself well positioned to step in and assist the families of NYPD personnel lost in the attack on the WTC. Prior to September 11, the foundation mainly provided services rather than distributed cash. However, the foundation was a reputable place to send money intended for distribution to the families of the deceased and seriously injured within the ranks of the NYPD. The foundation's Heroes Fund provided financial assistance, mental health programs, a resource center for NYPD families, and a variety of programs aimed at replacing lost protective gear and equipment (such as damaged vests). The Heroes Fund distributed \$1.5 million directly to NYPD families who lost a family member in the attack. The New York Police Department Foundation also established COPE, a free and confidential mental health program in collaboration with Columbia University and the New York-

¹According to documents at www.nypfwc.org (last accessed August 2003).

Presbyterian Hospital. COPE provided thousands of NYPD employees and their families counseling for post-traumatic stress disorder following the attacks.

The Port Authority Police World Trade Disaster Survivors Fund

The Port Authority Police Benevolent Association set up its own separate charity to assist with meeting the needs of the families of the 37 victims who were Port Authority police. The Port Authority Police World Trade Disaster Survivors Fund had collected \$13 million by 2003. A contribution in the amount of \$125,000 was dispersed to each family in 2001. Most of the remaining funds were to be put into trust funds for each of the 63 children of the deceased Port Authority police who were under the age of 23 on 9/11. The Port Authority Policy Benevolent Association intended to make this relief fund a permanent part of the labor union, so that in the event of a future act of terrorism or other disaster it would be ready to address the needs of affected union families.

Map of Lower Manhattan

The definition of “Lower Manhattan” varies from organization to organization. For example, the New York City Partnership (2001, p. 9) defines Lower Manhattan as the area below Chambers Street, while the Lower Manhattan Development Corporation covers the area south of Houston Street. However, many of the programs for those affected by 9/11 are for individuals and businesses in the area south of Canal Street. In this report, we also refer to the area south of Canal as Lower Manhattan. Figure D.1 on the following page shows a map of the lower part of Manhattan.

Figure D.1
Map of Lower Manhattan



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Summary of Benefits

Table E.1 on the next page tabulates the benefit estimates presented in Chapters Three through Seven. The data in the table have a number of limitations that the reader should keep in mind:

- Benefits have been set to zero for those cases in which we know that benefits were provided but have no basis for developing even a rough estimate of the magnitude of the benefits. For example, we know that private health insurers covered mental health benefits after the 9/11 attack, but we have no estimates of the amount paid out. Our estimates, thus, understate the actual benefits in certain cases.
- There is a great deal of uncertainty about the magnitude of some of the benefits, but we do not have enough information to consistently develop ranges into which program benefits are highly likely to fall. We, thus, present our best guess of what the benefits are likely to be. Our intent is to provide a sense of the rough order of magnitude of the benefits, not a precise estimate of the actual benefits provided. As a reflection of the underlying uncertainty, the numbers in Table E.1 are rounded to the nearest \$10 million.
- Many of the benefits will be paid over time. It is standard economic practice to discount future benefits back to a base year. We have not done this, however, because we were seldom able to acquire enough information on the time profile of the various benefits programs to do any realistic discounting.

Table E.1
Estimates of Benefits by Victim Group and Type of Loss (\$millions)

	Insurance	Tort	Government	Charity
Civilians Killed or Seriously Injured^a				
Personal injury	2,000	0	5,960 ^b	710
Property damage	0	0	0	0
Income loss	0	0	0	0
Revitalization	0	0	0	0
Emergency Responders Killed or Seriously Injured^a				
Personal injury	0	0	1,420 ^b	500
Property damage	0	0	0	0
Income loss	0	0	0	0
Revitalization	0	0	0	0
Injuries Due to Environmental Exposure				
Personal injury	60 ^c	0	490	60
Property damage	0	0	50	0
Income loss	0	0	0	0
Revitalization	0	0	0	0
Emotional Injuries				
Personal injury	30 ^c	0	140	40
Property damage	0	0	0	0
Income loss	0	0	0	0
Revitalization	0	0	0	0
Residents				
Personal injury	0	0	0	0
Property damage	500	0	100 ^d	80
Income loss	0	0	0	0
Revitalization	0	0	240	0
Workers				
Personal injury	0	0	0	0
Property damage	0	0	0	0
Income loss	0	0	1,090	540
Revitalization	0	0	70	0
Businesses				
Personal injury	0	0	0	0
Property damage	7,470	0	760	0
Income loss	9,510	0	600	0
Revitalization	0	0	4,880	110
Unallocated	0	0	0	650 ^e

^aIncludes all deceased, not just those who died in attacks on World Trade Center.

^bDoes not include the value of income tax and estate tax relief.

^cDoes not include payments from private health insurance and employee-assistance plans.

^dIncludes \$40 million from the Residential Grant Program to compensate households for hardships after 9/11.

^eMost of the unallocated funds are funds that had not been spent as of September 2003.

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